91-959

No. _____

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In The

Supreme Court of the United States

October Term, 1991

SHELL OIL COMPANY,

Petitioner,

vs.

CRUZ PEDRAZA, et al.,

Respondents.

Petition For A Writ Of Certiorari To The United States Court Of Appeals For The First Circuit

PETITION FOR A WRIT OF CERTIORARI

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I. QUESTIONS PRESENTED FOR REVIEW

Whether the United States Court of Appeals for the First Circuit erroneously found that the occupational health standards promulgated by the United States Occupational Safety and Health Administration did not preempt state juries in common law causes of action from establishing occupational health standards that differed from those established by the United States Occupational Safety and Health Administration.

Whether the employer's compliance with occupational health and safety standards established by the Occupational Health and Safety Administration satisfies as a matter of law a product supplier's duty to warn of risks associated with such compliance?

II. LIST OF ALL PARTIES

Petitioner, defendant-appellee below, is Shell Oil Company ("Shell"). Pursuant to Supreme Court Rule 28.1, a list of all of Shell's parents, subsidiaries, and affiliates is reproduced as Appendix 6 at App. 91.

Respondents, plaintiffs-appellants below are Cruz Pedraza, Alejandrina Pedraza, Roberto Pedraza, and Mary Ellen Pedraza.

III. TABLE OF CONTENTS

		Page
I.	QUESTION PRESENTED FOR REVIEW	i
II.	LIST OF ALL PARTIES	ii
III.	TABLE OF CONTENTS	iii
IV.	TABLE OF AUTHORITIES	v
V.	OPINIONS BY OTHER COURTS	1
VI.	STATEMENT OF JURISDICTION	1
VII.	CONSTITUTIONAL AND STATUTORY PROVISIONS	2
	Constitutional Provisions	2
	Statutes	3
	Regulations	4
VIII.	STATEMENT OF THE CASE	5
IX.	FEDERAL QUESTIONS RAISED	7
X.	REASONS FOR ALLOWANCE OF THE WRIT	8
	1. THE FIRST CIRCUIT'S REFUSAL TO RECOGNIZE THE SUPREMACY OF FEDERAL REGULATORY STANDARDS WHEN IN DIRECT CONFLICT WITH STATE LAW CONSTITUTES A RADICAL AND IRRATIONAL DEPARTURE FROM CONTROLLING AUTHORITY IN THIS COURT AND OTHER CIRCUITS	8

III. TABLE OF CONTENTS – Continued

Page

2. THIS COURT MUST CONSTRUE OSHA'S SAVINGS CLAUSE SO AS NOT TO PERMIT TORT ACTIONS UNDER STATE LAW THAT SUBSTANTIALLY INTERFERE WITH FEDERAL WORKPLACE SAFETY REGULATIONS 12

A. State Tort Actions that Substantially Interfere with Federal Safety Standards must be Preempted 12

B. Plaintiff's Tort Action in this Case Would Substantially Interfere with Relevant OSHA Standards 13

C. OSHA Workplace Safety Standards Conform to Criteria that Make Federal Preemption Especially Justified 15

D. The OSHA Savings Clause Can and Must be Construed so as not to Permit the Tort Action in this Case 21

E. The First Circuit's Wooden Construction of the OSHA Savings Clause is so Patently in Error that Wasteful Confusion is Certain to Reign without Clarification from this Court 26

3. FEDERAL PREEMPTION IN THE AREA OF PRODUCTS LIABILITY PRESENTS ISSUES OF NATIONAL IMPORTANCE WHICH, WITHOUT GUIDANCE FROM THIS COURT, ARE CREATING WASTEFUL CONFUSION BOTH IN COURTS AND IN PRODUCTS MARKETS 28

XI. CONCLUSION 30

IV. TABLE OF AUTHORITIES

Page

CASES

Associated Industries of Massachusetts v. Snow, 898 F.2d 274 (1st Cir. 1990) 2, 12

Boyle v. United Technologies Corp., 487 U.S. 500, 108 S.Ct. 2510, 101 L.Ed.2d 442 (1988) 22, 23, 24

Cipollone v. Liggett Group Inc., 893 F.2d 541 (3rd Cir. 1990), *cert. granted*, 111 S.Ct. 1386 (1991)..... 9

Dalehite v. United States, 344 U.S. 873, 73 S.Ct. 166, 97 L.Ed. 676 (1952) 25

Environmental Encapsulating Corp. v. New York, 855 F.2d 48 (2nd Cir. 1988) 12

Fidelity Federal Sav. & Loan Assoc. v. de la Cuesta, 458 U.S. 141, 73 L.Ed.2d 664, 102 S.Ct. 3014 (1982) 12

G&T Terminal Packaging v. Consolidated Rail, 830 F.2d 1230 (3rd Cir. 1987), *cert. denied*, 108 S.Ct. 1291, 99 L.Ed.2d 501, 485 U.S. 988 (1988) 10

Gibbons v. Ogden, 22 U.S. 1 (9 Wheat), 6 L.E.23 (1824) 14

Industrial Union v. American Petroleum Institute, 448 U.S. 607, 100 S.Ct. 2844, 65 L.Ed.2d 1010 (1988) 17

International Paper Co. v. Ouellette, 479 U.S. 481, 93 L.Ed.2d 883, 107 S.Ct. 805 (1987)..... 2, 10, 13

Kitts v. General Motors, 875 F.2d 787 (10th Cir. 1989), *cert. denied*, 108 L.Ed.2d 783, 110 S.Ct. 1781 (1990) 10

IV. TABLE OF AUTHORITIES – Continued

Page

National Solid Wastes Management, Assn. v. Killian, 918 F.2d 671 (7th Cir. 1990) 26

New Jersey State Chamber of Commerce v. Hughey, 774 F.2d 587 (3rd Cir. 1985) 12

Palmer v. Liggett Group, Inc., 825 F.2d 620 (1st Cir. 1987) 13

Pedraza v. Shell Oil Company, 724 F.Supp. 1 (D. Mass. 1989) 1

Pedraza, et al. v. Shell Oil Co., 942 F.2d 48 (1st Cir. 1991) 1

Pedraza, et al. v. Shell Oil Company, 729 F.Supp. 187 (D. Mass. 1990) 1

People v. Chicago Magnet Wire Corp., 534 N.E.2d 962 (Ill. 1989) 27

Pilot Life Ins. Co. v. Dedeaux, 481 U.S. 41, 95 L.Ed.2d 39, 107 S.Ct. 1549 (1987) 2, 13

Puffer's Hardware Inc. v. Donovan, 742 F.2d 12 (1st Cir. 1984) 12

Ray v. Atlantic Richfield Co., 435 U.S. 151, 55 L.Ed.2d 179, 98 S.Ct. 988 (1978) 14

San Diego Bldg. Trades Council v. Garmon, 359 U.S. 236, 3 L.Ed.2d 775, 79 S.Ct. 773 (1959) 2, 13

Taylor v. General Motors Corp., 875 F.2d 816 (11th Cir. 1989), *cert. denied*, 108 L.Ed.2d 783, 110 S.Ct. 1781 (1990) 10

Texas and Pacific Railway Co. v. Abilene Cotton Oil Co. (Abilene), 204 U.S. 426, 27 S.Ct. 350, 51 L.Ed. 553 (1907) 10

IV. TABLE OF AUTHORITIES – Continued

Page

Wood v. General Motors, Inc., 865 F.2d 395, (1st Cir. 1988), *cert. denied*, 108 L.Ed.2d 782, 110 S.Ct. 1781 (1990) ..... *passim*

CONSTITUTION

U.S. Const., Article VI, Clause 2 2

STATUTES

15 U.S.C. §1397(c) 10, 25

28 U.S.C. §1254(1) 1

29 U.S.C. §651 1

29 U.S.C. §652(8) 3

29 U.S.C. §653(b)(4) 3, 9, 21

29 U.S.C. §654(a) 3

29 U.S.C. §667(a) 3, 9

29 U.S.C. §667(b) 20

29 U.S.C. §667(c) 20

33 U.S.C. §1365(e) 10

49 U.S.C. §22 10

49 U.S.C. §1010 10

REGULATIONS

29 C.F.R. §1901.2 ..... 1, 4, 9

29 C.F.R. §1910.134 ..... 1, 5, 6, 13

IV. TABLE OF AUTHORITIES – Continued

Page

29 C.F.R. §1910.134(a)(1) 5, 6, 7

29 C.F.R. §1910.1000 ..... 4, 6, 13

SECONDARY AUTHORITIES

C. Bowen, *Miracle at Philadelphia* (1966) 14

Epstein, *Products Liability as an Insurance Market*, 14 J.Legal Stud. 645 (1985)..... 28

The Federalist No. 22 (A. Hamilton) (R. Fairfield, 2nd Ed. 1966) 14

15 Henderson, *Judicial Review of Manufacturers' Conscious Design Choices: The Limits of Adjudication*, 73 Colum. L.Rev. 1531 (1973) 25, 28

Henderson & Twerski, *Doctrinal Collapse in Products Liability: The Empty Shell of Failure to Warn*, 65 N.Y.U.L.Rev. 265 (1990).....28, 29

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V. OPINIONS BY OTHER COURTS

The unpublished Report and Recommendation Regarding Defendant Shell Oil Company's Motion for Summary Judgment dated March 15, 1989 is reproduced as Appendix 4 at App. 45.

The decision of the United States District Court styled *Pedraza v. Shell Oil Company*, 724 F.Supp. 1 (D. Mass. 1989) adopted the Magistrate's Recommendation by denying Shell's initial motion for summary judgment and is reproduced as Appendix 3 at App. 24.

The subsequent decision of the District Court granting Shell's motion for dismissal based on preemption is styled *Pedraza, et al. v. Shell Oil Company*, 729 F.Supp. 187 (D. Mass. 1990), and is reproduced as Appendix 2 at App. 18.

The decision of the United States Court of Appeals for the First Circuit reversing the decision of the district court is styled *Pedraza, et al. v. Shell Oil Co.*, 942 F.2d 48 (1st Cir. 1991), and is reproduced as Appendix 1 at App. 1.

VI. STATEMENT OF JURISDICTION

The judgment of the United States Court of Appeals for the First Circuit was rendered on August 13, 1991. Petitioner's motion for rehearing was denied by that court on September 6, 1991 and is reproduced as Appendix 5 at App. 84.

This Court has jurisdiction to review the judgment of the United States Court of Appeals for the First Circuit pursuant to 28 U.S.C. §1254(1) because the preemptive effect of the Occupational Safety and Health Act (OSHA), 29 U.S.C. §651 *et seq.* as specified in 29 C.F.R. §1901.2 and the regulations promulgated under its authority, 29 C.F.R. §1910.134 represents construction of one of the most important federal statutes of recent years. Additionally, the holding of the United States Court of Appeals that OSHA did not preempt efforts by the state to establish

common law occupational standards through jury verdicts conflicts with the holding by the same court of appeals that states could not administratively promulgate an occupational safety and health standard protecting workers where a federal standard was in effect. *Associated Industries of Massachusetts v. Snow*, 898 F.2d 274 (1st Cir. 1990). The finding that state administration regulations are preempted by specific OSHA regulations but that common law causes of action are not conflicts with this Court's holdings in *San Diego Building Trades Council v. Garmon*, 359 U.S. 236, 3 L.Ed.2d 775, 79 S.Ct. 773 (1959); *Pilot Life Ins. Co. v. Dedeaux*, 481 U.S. 41, 95 L.Ed.2d 39, 107 S.Ct. 1549; *International Paper Co. v. Ouellette*, 479 U.S. 481, 93 L.Ed.2d 883, 107 S.Ct. 805 (1987). The pervasiveness of OSHA regulation underscores the necessity of having uniform national standards and implementing the Supremacy Clause of Article VI of the United States Constitution.

VII. CONSTITUTIONAL AND STATUTORY PROVISIONS

CONSTITUTIONAL PROVISIONS

Article VI, Clause 2 to the United States Constitution provides:

> This Constitution, and the laws of the United States which shall be made in pursuance thereof; and all Treaties made, or which shall be made, under the Authority of the United States, shall be the supreme law of the land, and the Judges in every State shall be bound thereby, any thing in the Constitution or laws of any State to the contrary notwithstanding.

STATUTES

Title 29 U.S.C. §652(8) provides as follows:

The term "occupational safety and health standard" means a standard which requires conditions, or the adoption or use of one or more practices, means, methods, operations, or processes, reasonably necessary or appropriate, to provide safe or healthful employment and places of employment.

Title 29 U.S.C. §653(b)(4) provides as follows:

Nothing in this Act shall be construed to supersede or in any manner affect any workmen's compensation law or to enlarge or diminish or affect in any other manner the commonlaw or statutory rights, duties, or liabilities of employers or employees under any law with respect to injuries, diseases or death of employees arising out of, or in the course of, employment.

Title 29 U.S.C. §654(a) provides as follows:

Each employer –

(1) shall furnish to each of his employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees.

(2) shall comply with occupational safety and health standards promulgated under this chapter.

Title 29 U.S.C. §667(a) provides as follows:

(a) Assertion of State standards in absence of applicable Federal standards.

Nothing in this chapter shall prevent any State agency or court from asserting jurisdiction under State law over any occupational safety or

health issue with respect to which no standard is in effect under section 655 of this title.

REGULATIONS

29 C.F.R. §1901.2 provides in part as follows:

§1901.2 Alternative to Federal preemption

Section 18(a) of the Act is read as preventing any State agency or court from asserting jurisdiction under State law over any occupational safety or health issue with respect to which a Federal standard has been issued under section 6 of the Act.

* * *

29 C.F.R. §1910.1000 Table Z-1 provides as follows:

An employee's exposure to any material listed in Table Z-1, Z-2, or Z-3 of this section shall be limited in accordance with the requirements of the following paragraphs of this section.

(a) Table Z-1:

(i) *Materials with names preceded by "C" – Ceiling Values.* An employee's exposure to any material in table Z-1, the name of which is preceded by a "C" (e.g., C Boron trifluoride), shall at no time exceed the ceiling value given for that material in the table.

* * *

(e) To achieve compliance with paragraph (a) through (d) of this section, administrative or engineering controls must first be determined and implemented whenever feasible. When such controls are not feasible to achieve full compliance, protective equipment or any other protective measures shall be used to keep the exposure of employees to air contaminants within the

limits prescribed in this section. Any equipment and/or technical measures used for this purpose must be approved for each particular use by a competent industrial hygienist or other technically qualified person. Whenever respirators are used, their use shall comply with §1910.134.

TABLE Z-1

Substance	p.p.m.	mg./M
*	*	*
Epichlorohydrin – Skin	5	19

29 C.F.R. §1910.134(a)(1) provides as follows:

(a) *Permissible practice.* (1) In the control of those occupational diseases caused by breathing air contaminated with harmful dusts, fogs, fumes, mists, gases, smokes, sprays, or vapors, the primary objective shall be to prevent atmospheric contamination. This shall be accomplished as far as feasible by accepted engineering control measures (for example, enclosure or confinement of the operation, general and local ventilation, and substitution of less toxic materials). When effective engineering controls are not feasible, or while they are being instituted, appropriate respirators shall be used pursuant to the following requirements.

VIII. STATEMENT OF THE CASE

This is a products liability personal injury case. Plaintiffs allege that Mr. Cruz Pedraza became asthmatic as a result of exposure to epichlorohydrin present as a trace impurity in Shell's epoxy resin sold through a distributor

to Mr. Pedraza's employer, United Technologies Corporation (Pratt and Whitney). The plaintiffs' allegation is that Shell did not provide a warning about the dangers of epichlorohydrin to his employer. The plaintiff in answers to interrogatories stated alternatively: either (1) that the warning that should have been given was that an enclosed hood should have been provided, or (2) that the workers should have worn respirators and that the basis of the warning that should been provided were 29 C.F.R. §1910.134 and 29 C.F.R. §1910.1000, the NIOSH Criteria for a Recommended Standard. . . . Occupational Exposure to Epichlorohydrin, HEW Publication No. (NIOSH) 76-206 (Sept. 1976), reproduced here in part as Appendix 15 at App. 173; and the ACGIH Standard for Exposure to Epichlorohydrin.

Mr. Pedraza's employer, United Technologies, through its employees responsible for occupational safety – Mr. Owen, a certified industrial hygienist, and Mr. Schibi, a certified industrial hygienist, testified: (1) that Pratt & Whitney had received the Shell Material Safety Data Sheet (MSDS) for epoxy resin, Appendix 9 at App. 114, 122-123 and Appendix 8 at App. 108, (2) that the Shell MSDS disclosed the presence of epichlorohydrin, the amount of epichlorohydrin in the product and the fact that an OSHA limit on epichlorohydrin existed, Appendix 10 at App. 135-139, (3) that Pratt & Whitney read the Shell MSDS, Appendix 9 at App. 122, 123, (4) that Pratt & Whitney had the current NIOSH documents in their library, Appendix 10 at App. 138, and (5) that Pratt & Whitney, Mr. Pedraza's employer, recognized their duty to follow OSHA regulations and installed the local exhaust engineering equipment required by OSHA regulations, 29 C.F.R. §1910.134(a)(1), at Mr. Pedraza's work station, Appendix 9 at App. 116-120 and Appendix 8 at App. 110, 111. Available industrial hygiene monitoring reflected that the OSHA limits were met. Appendix 10 at App. 137, 138. The plaintiffs' expert, Dr. Schrager, agreed that local exhaust ventilation met the OSHA ventilation

standard. Appendix 10 at App. 127-133. In light of plaintiffs' theory of the case, the only failure to warn claim remaining was for Shell to have warned Pratt & Whitney of procedures or exposure standards as to epichlorohydrin different from those of OSHA.

The trial court having before it Shell's first motion for summary judgment which it had denied entered a judgment dismissing plaintiffs' claims based on OSHA preemption holding that there were specific OSHA regulations as to epichlorohydrin. *Pedraza, et al. v. Shell Oil Co., supra* (Reproduced as Appendix 2 at App. 18). The district court's finding was based on the extensive record which had established the undisputed facts that United Technologies had notice through Shell's hazard communication materials of the presence of epichlorohydrin in Shell's epoxy resin product, recognized its duty to comply with OSHA, and implemented one of the exposure control measures which met the OSHA requirements, i.e., local exhaust ventilation. 29 C.F.R. §1910.134(a)(1).

Mr. Pedraza appealed to the United States Court of Appeals for the First Circuit. That court reversed the trial court. *Pedraza v. Shell Oil Co., supra* (Reproduced as Appendix 1 at App. 1). Shell filed a motion for rehearing which also included a request that the court of appeals' opinion be clarified to state that the OSHA regulations were the duty of care owed to an employee. The motion for rehearing was denied (Reproduced as Appendix 5 at App. 84).

IX. FEDERAL QUESTIONS RAISED

This petition raises the issue of whether OSHA preempts common law causes of action when a supplier warns of the presence of a chemical, the employer acknowledges receipt of that warning, and the employer implements one of the alternative safety measures provided by OSHA regulations. This preemption issue was presented twice to the district court. Relevant portions of

Shell's briefs are reproduced as Appendix 13 at App. 148 and Appendix 14 at App. 157. The statutory preemption issue was presented to and decided by the court of appeals. Relevant portions of Shell's brief to the United States Court of Appeals are reproduced as Appendix 7 at App. 97. This issue was raised again in petitioner's motion for rehearing before the United States Court of Appeals for the First Circuit. Relevant portions of this motion are reproduced as Appendix 5 at App. 84.

X. REASONS FOR ALLOWANCE OF THE WRIT

1. THE FIRST CIRCUIT'S REFUSAL TO RECOGNIZE THE SUPREMACY OF FEDERAL REGULATORY STANDARDS THAT DIRECTLY CONFLICTS WITH STATE LAW CONSTITUTES A RADICAL AND IRRATIONAL DEPARTURE FROM CONTROLLING AUTHORITY IN THIS COURT AND OTHER CIRCUITS

This case presents an issue whose ultimate resolution by this Court will profoundly affect a host of federal safety statutes that contain both preemption provisions and savings clauses. Savings clauses, by allowing state tort actions based on standards of conduct that may conflict with existing federal standards, threaten the integrity of federal regulatory systems. Savings clauses must be construed carefully, in light of the protection afforded federal regulations by preemption holdings under the Supremacy Clause. The First Circuit construed the OSHA savings clause in a wooden and extremist manner that will allow state tort actions to compromise the integrity of the workplace safety standards set by a vital federal agency. This decision cannot remain uncorrected. Without giving any consideration to the important federal interests that were being set aside, the First Circuit placed itself in direct conflict with other federal circuits that have sought to adopt functional approaches to savings clause provisions in various federal safety statutes. Ironically, the decision by the First Circuit is in

direct conflict with a previous savings clause decision by the First Circuit as well as a previous First Circuit decision on OSHA preemption.

It is no exaggeration that should this decision stand, one of the broadest and most important federal safety schemes will be seriously compromised. In addition, great confusion will be introduced into an area of the law which desperately needs stability and predictability. When bad law, confusion and serious inter-circuit and intra-circuit conflict coalesce this court should grant certiorari.

We note that *Cipollone v. Liggett Group, Inc.*, 893 F.2d 541 (3rd Cir. 1990), *cert. granted*, 111 S.Ct. 1386 (1991), currently before this Court, does not raise the issue of the internal statutory conflict of a savings clause and a preemption provision. The relevant statute in that case does not contain a savings provision. There are some areas of overlap between *Cipollone* and this case; however, the issue which lies at the heart of the instant litigation raises a question of statutory interpretation which is not found in *Cippolone*.

Section 18(a) of the Occupational Safety and Health Act, 29 U.S.C. §667(a), provides that state agencies *or courts* can only assert jurisdiction over occupational health issues where no OSHA standard has been adopted. This statute has been interpreted by the Occupational Safety and Health Administration as preemptive. 29 C.F.R. §1901.2. However, 29 U.S.C. §653(b)(4) contains a clearly expressed savings clause.

This case presents the issue of how to reconcile these two seemingly contradictory provisions. This Court has interpreted at least three analogous federal safety statutes with substantially similar language in their savings clauses and held them preemptive of tort actions. The savings clause in the Interstate Commerce Act provided:

> Nothing in this Act contained shall in any way abridge or alter the remedies now existing at common law or by statute, but the provisions of

> this Act are in addition to such remedies. 49 U.S.C. §22 (subsequently revised and now 49 U.S.C. §1010).

This Court determined that such language did not avoid preemption of common law causes of action. *Texas and Pacific Railway Co. v. Abilene Cotton Oil Co. (Abilene)*, 204 U.S. 426, 27 S.Ct. 350, 51 L.Ed. 553 (1907); see also, *G&T Terminal Packaging v. Consolidated Rail*, 830 F.2d 1230, 1231 (3rd Cir. 1987), *cert. denied*, 108 S.Ct. 1291, 99 L.Ed.2d 501, 485 U.S. 988 (1988).

The Federal Clean Water Act contains equally broad savings clause language:

> Nothing in this section shall restrict any right which any person (or class of persons) may have under any statute or common law to seek enforcement of any effluent standard or limitation or to seek any other relief . . . . 33 U.S.C. §1365(e).

This Court nevertheless held the Clean Water Act preemptive of common law nuisance suit. See, *International Paper Co. v. Ouellette*, 479 U.S. 481, 93 L.Ed.2d 883, 107 S.Ct. 805 (1987).

The savings clause of the Federal Motor Vehicle Safety Standards Act (FMVSSA) provides:

> Compliance with any Federal motor vehicle safety standard issued under this subchapter does not exempt any person from any liability under common law. 15 U.S.C. §1397(c).

Several appeals courts held the FMVSSA preemptive of common law causes of action and this Court denied certiorari. See, *Wood v. General Motors, Inc.*, 865 F.2d 395, 408 (1st Cir. 1988), *cert. denied*, 108 L.Ed.2d 782, 110 S.Ct. 1781 (1990); *Taylor v. General Motors Corp.*, 875 F.2d 816 (11th Cir. 1989), *cert. denied*, 108 L.Ed.2d 783, 110 S.Ct. 1781 (1990); and *Kitts v. General Motors*, 875 F.2d 787 (10th Cir. 1989), *cert. denied*, 108 L.Ed.2d 783, 110 S.Ct. 1781 (1990).

Each of the above-enumerated statutes is every bit as broad as the language contained in OSHA; yet this Court

and other courts held that such savings clauses had to give way to preemption. We shall demonstrate that the tensions between pre-emption and these savings clauses are fully resolvable. Existing case law, both in this Court and in the various circuits, provides the direction for resolving this dilemma.

In sharp contrast to this caselaw, the First Circuit's opinion in the instant case does not simply exacerbate the internal tension between the savings and preemption; the court totally ignores the tension. The First Circuit's opinion focuses exclusively on the language of the savings clause and with wooden rigidity construes that language in a way that allows for the widest incursion into the core of OSHA regulation. Unlike other courts that have sought a functional approach to what must have been intended by Congress in allowing for savings clauses in the teeth of a pervasive federal regulatory scheme, the First Circuit paid no attention to the compromising of federal interests. Thus, the First Circuit's opinion is not merely a judgment call favoring savings over preemption in a given fact pattern. It is a blatant rejection of the view that federal interests need to be considered carefully in making the decision.

The error of the First Circuit goes yet further. To justify its sweeping reading of the savings clause the court relies upon a set of cases involving OSHA regulation and the savings clause. It is fair to say that not a single case relied upon supports the position taken. The decisions are at best irrelevant. At worst, they actually support the Petitioner's position as to preemption.

This, then, is a case of gross appellate error. It misuses authority in an almost shocking fashion. It eviscerates a significant part of a major federal regulatory scheme without examining the ramifications of doing so. It is in direct conflict with decisions of several circuits and those of this Court. Worst of all it creates a black letter rule that makes no sense whatsoever. To adopt the First Circuit opinion would be to declare the history of

OSHA and the goals set out by its founders to be a nullity.

2. THIS COURT MUST CONSTRUE OSHA'S SAVINGS CLAUSE SO AS NOT TO PERMIT TORT ACTIONS UNDER STATE LAW THAT SUBSTANTIALLY INTERFERE WITH FEDERAL WORKPLACE SAFETY REGULATIONS

A. State Tort Actions that Substantially Interfere with Federal Safety Standards must be Preempted

Federal safety regulations must be held to preempt state tort actions whenever the intended purpose and effect of tort actions is to force defendants to adopt precautionary measures that are flatly inconsistent with the federal standards. The fact that federal regulatory standards, rather than the Act itself, are threatened by state regulation is not significant. Federal regulations such as the workplace safety regulations involved in this case are no less preemptive of state law than are federal statutes. *Fidelity Federal Sav. & Loan Assoc. v. de la Cuesta*, 458 U.S. 141, 153-154, 73 L.Ed.2d 664, 675, 102 S.Ct. 3014 (1982). Moreover, OSHA standards specifically have been held to preempt state regulation of workplace safety. Several courts, including the United States Court of Appeals for the First Circuit, have held that state administrative regulations that regulate an area governed by specific OSHA regulations were preempted. *Associated Industries of Massachusetts v. Snow*, 898 F.2d 274 (1st Cir. 1990); *Puffer's Hardware Inc. v. Donovan*, 742 F.2d 12 (1st Cir. 1984); *Environmental Encapsulating Corp. v. New York*, 855 F.2d 48 (2nd Cir. 1988); and *New Jersey State Chamber of Commerce v. Hughey*, 774 F.2d 587 (3rd Cir. 1985). These cases are in direct conflict with this case. In determining if a state law is preempted by implication, "one must look to interference with Congress' chosen method as well as to the ultimate goal of the Statute." *Wood v. General Motors Corp.*, 865 F.2d 395, 408 (1st Cir. 1988), *cert. denied*, 108

L.Ed.2d 782, 110 S.Ct. 1781 (1990). See also, *International Paper Co. v. Ouellette*, 479 U.S. 481, 93 L.Ed.2d 883, 107 S.Ct. 805 (1987).

This case involves state tort law, not state administrative regulation, but decisions of this Court and the United States Court of Appeals for the First Circuit have held that common law tort actions are preempted to the same extent as state regulatory action whenever those tort actions are in conflict with federal safety standards. See, *Pilot Life Ins. Co. v. Dedeaux*, 481 U.S. 41, 95 L.Ed.2d 39, 107 S.Ct. 1549 (1987); *International Paper Co. v. Ouellette, supra*; *San Diego Bldg. Trades Council v. Garmon*, 359 U.S. 236, 3 L.Ed.2d 775, 79 S.Ct. 773 (1959); *Wood v. General Motors Co., supra*; and *Palmer v. Liggett Group, Inc.*, 825 F.2d 620 (1st Cir. 1987). It follows that preemption occurs if the OSHA workplace standards in this case are threatened or compromised by state tort actions setting inconsistent standards.

B. Plaintiff's Tort Action in this Case Would Substantially Interfere with Relevant OSHA Standards

The interference that would result from allowing the Plaintiffs' tort claim to proceed is apparent from the testimony of the Plaintiffs' own expert on the method used to control exposure. Dr. Schrager testified it was his opinion that Shell's warning should have specified the use of a personal respirator as an alternative to engineering control. Appendix 10 at App. 125. Clearly the purpose behind this claim of failure to warn is to induce employers to use personal respirators instead of engineering controls. This objective flatly contradicts the specific language of 29 C.F.R. §§1910.134 and 1910.1000 which only allows use of personal respirators when engineering controls are not feasible.

The permissible exposure levels established by 29 C.F.R. §1910.1000 cannot be lowered by state law. A federal agency acting within the scope of its congressionally

mandated authority has established a specific level for exposure to epichlorohydrin in the workplace and the specificity of its terms establish that it is not subject to alteration by state law. *Ray v. Atlantic Richfield Co.*, 435 U.S. 151, 55 L.Ed.2d 179, 98 S.Ct. 988 (1978). Uniform application of occupational health and safety standards was the articulated rationale for the passage of OSHA, in order to insure that states which vigorously adopted and implemented safety legislation would not be put at a competitive disadvantage with those which did not. S. Rep. No. 1282, 91st Cong., 2d Sess. 1 (1970), *reprinted in* 1970 U.S. Code Cong. & Admin. News 1852, reproduced as Appendix 12 at App. 146. *Wood, supra* at 414. Uniformity of commercial regulation was at the heart of the issue which led to the Constitution. See, *Gibbons v. Ogden*, 22 U.S. 1 (9 Wheat), 6 L.E.23 (1824); C. Bowen, *Miracle at Philadelphia* (1966); *The Federalist*, No. 22, at 50-58 (A. Hamilton) (R. Fairfield 2nd Ed. 1966). When the plaintiff in this case insists that the defendant should have warned the plaintiff's employer that the levels of exposure to epichlorohydrin set by OSHA are not safe and by implication should be lower or that something other than an approved control measure is insufficient under tort law, the plaintiff is asking the court to use state tort law to second-guess the OSHA standard. Indeed, the plaintiff would have not a state regulatory agency but a jury of laypersons do the second-guessing.

When plaintiff demands that the defendant-manufacturer should have warned the employer that OSHA regulations approving levels of exposure to a substance are unsafe there is little question that the common law is in direct conflict with federal standards. Plaintiff's demand that the manufacturer should have warned the employer to utilize one, and not the other of two OSHA-approved methods to control exposure might appear at first blush not to create a direct conflict between state tort law and federal regulatory authority, since what is being urged on the employer has, after all received OSHA approval. However, properly understood this demand is equally in

conflict with OSHA's regulatory scheme. By allowing the employer to choose among two acceptable methods of controlling exposure to an environmental agent, OSHA has consciously decided to allow the employer to exercise discretion in a manner that better suits that employer's specific workplace environment. By demanding that the manufacturer urge the method which plaintiff prefers as the sole engineering response to the risk, state tort law flatly contradicts the goal of OSHA to allow unquestioned choice between two fully acceptable alternatives.

C. OSHA Workplace Safety Standards Conform to Criteria that Make Federal Preemption Especially Justified.

Petitioner does not contend that every federal safety standard that touches upon conduct normally subject to state tort law is *ipso facto* entitled to preemptive effect. Relatively few areas of the law create the kind of irreconcilable tension between federal standards and state tort law determinations that demand preemption. For reasons which we shall detail, the OSHA standards involved in this litigation belong to a narrow class of federal standards that must not be required to compete with state tort law. To recognize one is to damn the other. And when federal standards clash with state standards, the latter must give way.

Litigants favoring federal preemption typically argue that federal standards seek consistency and uniformity, and that state tort regulation disturbs that goal. Ultimately, the party asserting preemption must convince a court that comprehensive across-the-board uniformity is the desideratum of the federal statute. Four functional criteria identify those federal regulatory schemes that deserve to preempt conflicting state tort law. No single criterion provides a litmus test as to whether preemption is required. We articulate a functional analysis that sheds light on the question of how broad and encompassing a

federal scheme the Congress actually intended to establish and which are met in this case.

The First Criterion for Federal Preemption: A Rigorous and Full-Blown Federal Administrative Process Leading to Adoption of the Safety Standard

The safety standard adopted by OSHA was preceded by a thoroughgoing and exhaustive process designed to bring to light all plausible health risks and to address them responsibly. Before any attempt at standard setting was undertaken, an independent arm of the Department of Health and Human Services – the National Institute for Occupational Safety and Health (NIOSH) – undertook a massive study of Epichlorohydrin in the workplace. The results of the initial analysis and research were reviewed by a host of divisions within NIOSH and by outside consultants from labor, management, academia and state health agencies. An exhaustive 151-page report recommended a standard for Epichlorohydrin. NIOSH Criteria for a Recommended Standard. . . . Occupational Exposure to Epichlorohydrin, reproduced in part as Appendix 15 at App. 173.

After submission of the NIOSH Report, a standard for Epichlorohydrin was promulgated by the Secretary of Labor and was subject to a rigorous process which opened the standard to comment and commentary by all interested segments of society. Section 6(b)(5) mandates that the standard should accomplish "the highest degree of health and safety for the employee. . . . "

The federal epichlorohydrin standard in this case was the product of an intense and wide ranging regulatory inquiry that called for input and evaluation by many disciplines and a wide spectrum of political opinion. The objective against which the safety standard was to be measured by both the agency and courts in reviewing its efficacy was that it provide "the highest degree of health and safety for the employee. . . . " The standard established is subject to judicial review including review by

this Court. See, *Industrial Union v. American Petroleum Institute*, 448 U.S. 607, 100 S.Ct. 2844, 65 L.Ed.2d 1010 (1988). It would be fatuous to believe that a process so exhaustive was designed by the Congress to be overturned by the whim of a single jury applying retrospectively vague principles of state tort law. Yet this is precisely the result that the First Circuit's ruling below achieves.

The Second Criterion for Federal Preemption: The Specificity of the Federal Safety Standard

Some federal regulation allows for a broad range of discretion by setting general goals that regulated parties are to meet. OSHA regulations are a more exacting breed. They speak in exquisite detail and leave nothing to the imagination. Not only does the regulation set forth the accepted levels of exposure to epichlorohydrin with exactitude (5 p.p.m.), but the specific engineering alternatives on how to accomplish the desired level of safety are mandated by regulation. As we noted earlier, OSHA specifically approved the local exhaust ventilation system utilized by the employer in this case. Plaintiff urges that the manufacturer should have warned them against the use of this specifically approved system. That the alternate control system to which plaintiff points was also approved by OSHA does not alter the fact that plaintiff is using the state tort law system to declare inadequate an environmental control system which OSHA fully approved. Thus, unlike claims in other areas of federal regulation where the charge is that alternate behavior by the regulated party is equally consistent with the general agency standard, here the regulation unmistakably sets forth approved responses to the risk. The plaintiff's claim in this case insists on one rather than the other of two engineering responses approved by OSHA. Regulatory specificity dictates preemption where a specific OSHA approved alternative regulation exists. Neither the

employer or the manufacturer could ever choose correctly under plaintiffs' theory even though the OSHA regulation was met.

The Third Criterion for Federal Preemption: The Integrated Nature of the Federal Regulations

In determining whether a federal safety regulation or standard should be given preemptive effect, it is necessary to examine the feasibility of allowing competing state and federal standards to exist side by side. Admittedly, whenever differing standards are given approval by law, there is a loss of uniformity. But on rare occasion, far more than uniformity is at stake. Sometimes the entire regulatory effort is placed in danger. OSHA is charged not with the management of a single risk, but with governing the overall safety of the workplace environment by comprehensive regulation. Managing the workplace environment cannot be accomplished by examining one single risk to a single worker. The agency must consider a host of possible risks and must evaluate their import and interrelation to each other. It cannot (as the individual torts litigant can) afford to focus on a single risk and demand an engineering response that either compromises safety in other sectors of the workplace or makes it economically unfeasible for the employer to respond fairly to a broad range of risks. OSHA regulation is organic in nature. It seeks to accomplish a balanced, integrated approach to safety in the workplace. In sharp contrast, individual tort litigaton need not concern itself with the organic nature of regulation. As its primary focus, tort has an injured plaintiff and what might have been done differently to rescue him from injury. Broader inquiry into the whole is the task of regulators, not the tort system.

Comprehensive and detailed federal regulation cannot tolerate inconsistent, idiosyncratic rulings from juries who pay no allegiance whatever to the federal goal of integrated planning for safety. The two very different systems of safety regulation cannot co-exist because they

speak to fundamentally different goals. Only preemption assures that the broad-based goal of the OSHA scheme is given supremacy.

The Fourth Criterion for Federal Preemption: Express Federal Statutory Limitations on State Regulation

It is not always clear from the structure of a federal statute how pervasive the control of the federal regulatory agency is to be in the face of state attempts to regulate. Ultimately, the question that must be confronted is whether the statutory scheme gives evidence of some accommodation of state efforts to provide alternate regulation. OSHA is quite explicit regarding to the degree of accommodation that the Act contemplates. Sec. 18(b) and (c) of the Act provide:

> (b) Any State which, at any time, desires to assume responsibility for development and enforcement therein of occupational safety and health standards relating to any occupational safety or health issue with respect to which a Federal standard has been promulgated under section 6 shall submit a State plan for the development of such standards and their enforcement.
>
> (c) The Secretary shall approve the plan submitted by a State under subsection (b), or any modification thereof, if such plan in his judgment –
>
> (1) designates a State agency or agencies as the agency or agencies responsible for administering the plan throughout the State,
>
> (2) provides for the development and enforcement of safety and health standards relating to one or more safety or health issues, which standards (and the enforcement of which standards) are or will be at

> least as effective in providing safe and healthful employment and places of employment as the standards promulgated under section 6 which relate to the same issues, and which standards, when applicable to products which are distributed or used in interstate commerce, are required by compelling local conditions and do not unduly burden interstate commerce,
>
> (3) provides for a right of entry and inspection of all workplaces subject to the Act which is at least as effective as that provided in section 8, and includes a prohibition on advance notice of inspections,
>
> (4) contains satisfactory assurances that such agency or agencies have or will have the legal authority and qualified personnel necessary for the enforcement of such standards,
>
> (5) gives satisfactory assurances that such State will devote adequate funds to the administration and enforcement of such stands, . . . 29 U.S.C. §667(b) and (c).

Nothing could be clearer. If a state were to directly seek to provide alternative standards, indeed even more rigorous standards, it would not be permitted to do so unless the Secretary of Labor determined that the administrative mechanism to monitor compliance and enforce such alternative standards were available at the state level. The irony is that when a court allows a tort system of regulation to induce employer changes of occupational health and safety standards, such misguided deference to state tort standards are not subject to *any* federal monitoring or control. State tort law simply esmasculates the clear OSHA statutory scheme.

D. The OSHA Savings Clause Can and Must be Construed so as not to Permit the Tort Action in this Case

Given the strength of the foregoing arguments applied to the facts of this case, it is hardly surprising that the opinion of the Court of Appeals rejecting preemption relies almost exclusively on the explicit language of the savings clause in the OSHA Act. 29 U.S.C. §653(b)(4) provides:

> Nothing in this Act shall be construed to supersede or in any manner affect any workmen's compensation law or to enlarge or diminish or affect in any other manner the common law or statutory rights, duties, or liabilities of employers and employees under any law with respect to injuries, diseases, or death of employees arising out of, or in the course of, employment.

As previously discussed, Courts of Appeals have construed similar language in other federal safety statutes so as not to permit tort actions of the sort involved in this case. What did the Congress intend to include in this savings clause? Clearly workers' compensation rights are preserved. But what meaning should attach to "the common law . . . rights . . . of employers and employees under any law with respect to injuries . . . arising out of . . . employment."? Consistent with Petitioner's analysis of the only sensible interface between OSHA standards and state regulation via tort, the drafters must have intended to preserve any and all rights the preservation of which would not interfere with OSHA's charge to establish national workplace safety standards. Being a no-fault compensation system, worker compensation does not interfere with OSHA standards. Indeed, worker compensation actually assists OSHA as it bars the sorts of negligence-based tort claims by employees against employers that would interfere with OSHA's objectives.

What about tort actions against third persons? Again, it should depend on the extent to which recognizing such claims would compromise the integrity of OSHA standards. If a third person entered the workplace and attacked an employee with a knife, the savings clause in OSHA would preserve the ensuing tort claim against the attacker because that tort claim would not implicate OSHA standards. What about products liability actions against manufacturers and distributors for injuries connected with workplace use and consumption of allegedly defective products? Here, too, the answer depends on the extent to which such actions interfere with OSHA regulations. Actions based on manufacturing defects would not interfere, and therefore should be saved by the savings clause. Recovery for manufacturing defects in no way implicates the sorts of design and warnings issues that OSHA standards address. As earlier portions of this Petition have explained, the tort action in this case directly conflicts with federal standards. Congress could not have intended the prosecution of such tort actions.

Decisions by this Court and the Courts of Appeals make clear that the foregoing approach to OSHA's broadly drafted savings clause – an approach that allowed manufacturing defect actions but bars actions for defective design and failure to warn when such actions contradict OSHA safety standards – is the only approach consistent with the intent of Congress. See, *Boyle v. United Technologies Corp.*, 487 U.S. 500, 108 S.Ct. 2510, 101 L.Ed.2d 442 (1988). The issue in *Boyle* was whether a contractor who builds military equipment to special government specifications and sells such equipment to the Federal Government can be held liable under state tort law for injury caused to military personnel by an alleged design defect in the equipment. The Court of Appeals in *Boyle* had denied the contractor's liability because it would eventually cause the liability costs to be passed on

to the federal government in the form of higher equipment prices, in violation of a long line of decisions under the Federal Tort Claims Act preventing military personnel from directly imposing such costs on the government via direct tort actions for service-related injuries.

Justice Scalia's majority opinion in *Boyle* rejected this reasoning because it was both too broad – it would deny liability even when the equipment was not tailor-made to the government's specifications – and also too narrow – it would allow private citizens to sue contractors in tort even when the product that caused their injuries was tailor-made for the government. The majority opinion explained (487 U.S. at 511-512):

> There is, however, a statutory provision that demonstrates the potential for, and suggests the outlines of, "significant conflict" between federal interests and state law in the context of government procurement. In the Federal Tort Claims Act (FTCA), Congress authorized damages to be recovered against the United States for harm caused by negligent or wrongful conduct of Government employees, to the extent that a private person would be liable under the law of the place where the conduct occurred. 28 U.S.C. §1346(b). It excepted from this consent to suit, however,
>
> > [a]ny claim . . . based upon the exercise or performance or the failure to exercise or perform a discretionary function or duty on the part of a federal agency or an employee of the Government, whether or not the discretion involved be abused.
>
> 28 U.S.C. §2680(a).
>
> We think that the selection of the appropriate design for military equipment to be used by our Armed forces is assuredly a discretionary function within the meaning of this provision. It

> often involves not merely engineering analysis but judgment as to the balancing of many technical, military, and even social considerations, including specifically the trade-off between greater safety and greater combat effectiveness.
>
> * * *
>
> In sum, we are of the view that state law which holds Government contractors liable for design defects in military equipment does in some circumstances present a "significant conflict" with federal policy and must be displaced.

The parallel between this Court's reasoning in *Boyle* and Petitioner's suggested approach to the OSHA savings clause could not be closer. To be sure, *Boyle* involved the government contractor defense and this case involves the savings clause in OSHA. But both cases present the identical issue: whether state tort actions that interfere with the exercise of discretion by a federal agency should be allowed to be brought.

Moreover, *Boyle* involved allegations under state law of defective product design whereas this case involves allegations of failure to warn. But once again this is a difference of no relevance. OSHA exercises discretion to no less extent when it mandates specific warnings than when it mandates designs. Moreover, the tort claim in this case would pressure the employer to reject safety equipment approved under relevant OSHA regulations.

The implications of this Court's decision in *Boyle* are inescapable. To allow tort actions to be brought under state law against product manufacturers and distributors on the basis that the product designs and modes of marketing are defective, notwithstanding that they conform to detailed, precise OSHA standards would, in the words of this Court's majority opinion in *Boyle*, interfere with the "discretionary function" of OSHA in selecting the appropriate product designs and warnings in the workplace. Clearly OSHA could not be sued for its exercise of

its governmental authority. See, *Dalehite v. United States*, 344 U.S. 873, 73 S.Ct. 166, 97 L.Ed. 676 (1952). It follows that the savings clause must not be construed to allow a suit against a manufacturer whose customer complied with that governmental decision.

Ironically, another decision supporting this sensible, functional interpretation of the OSHA savings clause is *Wood v. General Motors Corp.*, 865 F.2d 395 (1st Cir. 1988). In *Wood*, the issue was whether federal auto safety regulations preempted state law tort claims that a motor vehicle design was defective because it lacked airbags. The savings clause in the National Traffic and Motor Vehicle Safety Act of 1966 is broader and more all-encompassing than the OSHA savings clause involved in the instant case:

> Compliance with any Federal motor vehicle safety standard issued under this subchapter does not exempt any person from any liability under common law. 15 U.S.C. §1397(c).

Notwithstanding the breadth of this savings clause language, the Court of Appeals for the First Circuit held that – in light of the fact that product design claims were not so frequently brought in 1966 when the Safety Act was enacted, and given the degree to which a design claim under state law would interfere with federal safety regulation of auto designs, Congress could not have intended to allow design-based state tort actions that conflict with federal safety standards.

The very same conclusion is required in the instant case involving the OSHA savings clause. When OSHA was enacted into law in 1970, product design and warning litigation was in its infancy. See Henderson, *Judicial Review of Manufacturers' Conscious Design Choices: The Limits of Adjudication*, 73 Colum. L.Rev. 1531, 1546 (1973). Congress could not have consciously intended to preserve state design and warning claims directly interfering with OSHA design and warnings standards. Claims

based on manufacturing defects are saved, as they are under the auto design Safety Act, because they were common (and thus presumably well understood by Congress) in the 1960's and early 1970's and do not interfere with relevant federal design and warning regulations. But state tort actions based on design and warning drastically interfere with federal design and warning regulations. Savings clauses must be construed to protect such federal design and warning regulations against the potentially devastating effects of inconsistent tort litigation under state law. The Petitioner finds it nothing short of incredible that the First Circuit, which decided *Wood* in such a functionally sensible manner, could have decided the instant case so woodenly and nonsensibly. The Court must grant this Petition and set things right.

E. The First Circuit's Wooden Construction of the OSHA Savings Clause is so Patently in Error that Wasteful Confusion is Certain to Reign without Clarification from this Court

How could the First Circuit, which decided *Wood* so sensibly, have gotten this case so wrong? Careful examination of the opinion reveals that the First Circuit looked at decisions recognizing an employee's rights to bring tort actions against his employer on legal bases that in no way implicated the efficacy of OSHA safety standards, and then leaped all the way to the conclusion that any and all tort actions against any and all defendants – even actions that grossly interfere with OSHA standards – are explicitly saved by the OSHA savings clause. The Court of Appeals made this leap without engaging in any functional analysis whatever, relying on misinterpretations and misapplications of caselaw.

The First Circuit relies heavily on *National Solid Wastes Management, Assn. v. Killian*, 918 F.2d 671, 680 n.9 (collecting cases) (7th Cir. 1990) for the proposition that *all* rights in tort are saved from preemption; but that case

and all of the other cases collected in its note 9 were actions against employers, either regulatory, criminal or in tort; or by ex-employees, for wrongful discharge. Not a single decision relied on by the First Circuit carried the slightest negative implication for OSHA safety regulations. The First Circuit also relies on a quote out of context from *People v. Chicago Magnet Wire Corp.*, 534 N.E.2d 962, 968 (Ill. 1989), to the effect that tort claims are preserved by the OSHA savings clause. But that case involved a criminal action against an employer on grounds having nothing to do with OSHA standards. Moreover, the court in *Chicago Magnet* clearly intended its use of "tort law" to be synonymous with "tort claims against the employer;" it justified the employer's criminal liability by analogizing to the employer's liability for punitive damages in tort, which liability the court assumed was preserved by the savings clause.

Notwithstanding the First Circuit's attempt in its opinion, below, to create an impression to the contrary, not one single court or commentator agrees with its bizarre conclusion that the savings clause in OSHA preserves an employee's right to sue for a manufacturer's failure to warn even when the state tort standard is flatly inconsistent with an existing OSHA standard. The court below has taken an enormous leap from decisions condoning state wrongful discharge actions by ex-employees, which do not implicate federal workplace standards, to condoning state products liability actions for design and warning, which do most drastically undermine federal efforts to regulate safety in the workplace. We have demonstrated that such products liability actions clearly undermine the intended uniformity of OSHA's workplace safety standards, and cannot have been intended by Congress to be preserved in OSHA's savings clause.

3. FEDERAL PREEMPTION IN THE AREA OF PRODUCTS LIABILITY PRESENTS ISSUES OF NATIONAL IMPORTANCE WHICH, WITHOUT GUIDANCE FROM THIS COURT, ARE CREATING WASTEFUL CONFUSION BOTH IN COURTS AND IN PRODUCTS MARKETS

The Court must understand the enormous moment of this decision and why it is imperative that certiorari be granted. One cannot fully estimate the impact of a finding of non-preemption without understanding how open-ended and unstructured the world of common law products liability has come to be. See Huber, *Liability: The Legal Revolution and Its Consequences* (1988); Henderson & Twerski, *Doctrinal Collapse in Products Liability: The Empty Shell of Failure to Warn*, 65 N.Y.U.L.Rev. 265 (1990).

It is by now abundantly obvious to most observers that expansionary trends in American products liability law have gone beyond the point where they serve useful social purposes and are, instead, threatening the continued viability of markets not only for products but for insurance as well. See Epstein, *Products Liability as an Insurance Market*, 14 J.Legal Stud. 645 (1985); Priest, *The Current Insurance Crisis and Modern Tort Law*, 96 Yale L.J. 1521 (1987). In its infancy, products liability focused almost exclusively on injuries caused by manufacturing defects – the few individual units among the many in a product line that deviate dangerously from the manufacturer's intended design specifications. See Henderson, *Judicial Review of Manufacturers' Conscious Design Choices: The Limits of Adjudication*, 73 Colum.L.Rev. 1531, 1544-1546 (1973). Manufacturing defects and the harms they cause are predictable and insurable.

Moreover, it is difficult to criticize the development in the 1970's and early 1980's of judicial review of the reasonableness of manufacturers' decisions regarding how to design and market their products. But somewhere along the way judicial review of product designs and

failures to warn got out of hand. See Henderson & Twerski, *Doctrinal Collapse in Products Liability: The Empty Shell of Failure to Warn*, 65 N.Y.U.L.Rev. 265 (1990); Twerski, *Seizing the Middle Ground Between Rules and Standards in Design Defect Litigation: Advancing Directed Verdict Practice in the Law of Torts*, 57 N.Y.U.L.Rev. 521 (1982). Various states have imposed different standards for product design liability, confronting manufacturers with a patchwork quilt of state regulation via tort with which no manufacturer could hope to manage except by large investments in liability insurance which, under the current conditions of chaos, is frequently unavailable. See Viscusi, *Reforming Products Liability* (1991).

Petitioner has explained in earlier portions of its argument how preemption insulates federal safety regulation from the erosive effects of state tort law sending inconsistent, contradictory signals to regulated businesses. It gives federal regulations breathing room to achieve the consistency and nat'on-wide uniformity sought by federal safety regulation. Petitioner now emphasizes another salutory effect of preemption: it replaces haphazard, herky-jerky retrospective state tort law with coherent, uniform, stable and prospective federal standards by which to regulate the design and marketing of products. In large measure, the problems associated with excessive, overexpanded products liability law are national problems, solvable only at the federal level. When justified, a judicial holding that federal safety regulations preempt state tort law supplies a meaningful solution to an otherwise intractable national problem.

XI. CONCLUSION

Petitioner believes that this court should issue a writ of certiorari to review this decision of the First Circuit. Petitioner reiterates that this decision conflicts with pre-emption rulings of this Court, other Courts of Appeal, and previous decisions of the First Circuit. Moreover, this is a statutory interpretation issue of significant national importance which needs clarification by this Court.

Respectfully submitted,

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APPENDIX 1

Cruz PEDRAZA, Alejandrina Pedraza, Roberto Pedraza and Mary Ellen Pedraza, Plaintiffs, Appellees,

v.

SHELL OIL COMPANY, Defendant, Appellant.

Cruz PEDRAZA, Alejandrina Pedraza, Roberto Pedraza and Mary Ellen Pedraza, Plaintiffs, Appellants,

v.

SHELL OIL CO., Defendant, Appellee.

Nos. 90-1291, 90-1402.

United States Court of Appeals, First Circuit.

Heard Sept. 14, 1990.

Decided Aug. 13, 1991.

Worker filed action against chemical manufacturer to recover damages for injuries arising from respiratory ailments he allegedly developed from workplace exposure to Epichlorohydrin (ECH), a toxic chemical. The United States District Court for the District of Massachusetts, 729 F.Supp. 187, Frank H. Freedman, Chief Judge, dismissed on preemption grounds, and worker appealed. The Court of Appeals, Cyr, Circuit Judge, held that: (1) Occupational Safety and Health Act (OSHA) did not preempt state law tort provisions like those invoked by the plaintiff, and (2) court would not exercise pendent appellate jurisdiction over otherwise nonappealable orders.

Vacated and remanded.

John B. Stewart, with whom Edward V. Leja and Moriarty, Donoghue & Leja, P.A., Springfield, Mass., were on brief, for plaintiffs-appellees.

Burt Ballanfant, Houston, Tex., with whom Robert L. Leonard and Doherty, Wallace, Pillsbury & Murphy, Springfield, Mass., were on brief, for defendant-appellant.

Before TORRUELLA and CYR, Circuit Judges, and BOWNES, Senior Circuit Judge.

CYR, Circuit Judge.

Plaintiff Cruz Pedraza commenced a civil action in the United States District Court for the District of Massachusetts, alleging that he developed respiratory ailments from workplace exposure to Epichlorohydrin ("ECH"), a toxic chemical manufactured by defendant Shell Oil Co. ("Shell"). The district court dismissed the action on the ground that the Occupational Safety and Health Act, 29 U.S.C. § 655 *et seq.* ("OSHA"), preempts state law. Pedraza appeals. Shell cross-appeals a district court order disallowing Shell's motion for summary judgment under the applicable statute of limitations. We vacate the order of dismissal, dismiss the cross-appeal, and remand for further proceedings.

I

BACKGROUND

The material facts are not in dispute. From 1972 through 1981, Pedraza was employed by United Technologies Corporation in Rocky Hill, Connecticut. During 1977, he was assigned to a chemical mixing operation

which exposed him to ECH. Within a few weeks Pedraza experienced asthma symptoms for the first time. Although Pedraza was reassigned in late 1977 to work duties which did not entail ECH exposure, over the course of the next several years he continued to experience acute asthma symptoms.

On November 4, 1985, Pedraza brought the present diversity action, asserting an assortment of tort and warranty claims predicated on Connecticut law. Following discovery, defendant Shell moved for summary judgment on the ground that Pedraza's claims were time-barred and, alternatively, that Shell had discharged its duty to warn under the so-called "sophisticated user" defense. A United States magistrate judge recommended denial of summary judgment. Shell objected to the recommended disposition and argued, additionally, that OSHA and the related regulations promulgated by the Occupational Safety and Health Administration preempt Connecticut law. The district court directed entry of summary judgment for Shell on the preemption ground.

II

DISCUSSION

A. *Pedraza's Appeal*

We review the grant of summary judgment *de novo*, employing the same standards utilized by the trial court. *See Siegal v. American Honda Motor Co., Inc.*, 921 F.2d 15, 17 (1st Cir. 1990); *Petitti v. New England Tel. & Tel. Co.*, 909 F.2d 28, 30-31 (1st Cir. 1990). Thus, in the present appeal we consider a pure issue of law: whether OSHA preempts state law.

The district court correctly observed that OSHA regulations establish federal restrictions on workplace exposure to ECH[1] and require employers to provide protective equipment for employees who work with hazardous substances.[2] The court concluded that the provisions of Connecticut common law and statutory law on which Pedraza's causes of action against Shell are predicated constitute state regulation in the field of occupational safety and health which must yield to OSHA. *Pedraza v. Shell Oil Co.*, 729 F.Supp. 187, 188-89 (D.Mass.1990).[3]

The Supremacy Clause of the United States Constitution operates to preempt state laws which unduly interfere with federal law or policy. U.S. Const. art. VI, cl. 2. *See also Gibbons v. Ogden*, 22 U.S. (9 Wheat.) 1, 211, 6 L.Ed. 23, 73 (1824); *Securities Industry Ass'n v. Connolly*, 883 F.2d 1114 (1st Cir.1989), *cert. denied*, ___ U.S. ___, 110 S.Ct. 2559, 109 L.Ed.2d 742 (1990). As we were reminded again recently, however, our preemption analysis begins with " 'the assumption that the historic police powers of the States were not to be superseded by the Federal Act unless that was the clear and manifest purpose of Congress.' " *Wisconsin Public Intervenor v. Mortier*, ___ U.S. ___, 111 S.Ct. 2476, 115 L.Ed.2d 532 (1991) (quoting *Rice v. Santa Fe Elevator Co.*, 331 U.S. 218, 230, 67 S.Ct. 1146, 1152, 91 L.Ed. 1447 (1947)). The tort rules and kindred state law

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[1] *See* 29 C.F.R. § 1910.1000, Table Z-1.

[2] *See* 29 C.F.R. §§ 1910.132, 1910.133, 1910.134.

[3] The court did not address 29 U.S.C. § 653(b)(4), the "savings clause." *See* text at p. 53 *infra*.

provisions invoked by Pedraza are well within Connecticut's "traditional authority to provide tort remedies to [its] citizens. . . . " *Silkwood v. Kerr-McGee Corp.*, 464 U.S. 238, 248, 104 S.Ct. 615, 621, 78 L.Ed.2d 443 (1984); *see also International Paper Co. v. Ouellette*, 479 U.S. 481, 503, 107 S.Ct. 805, 817, 93 L.Ed.2d 883 (1987). Consequently, we will not find federal preemption in the present case unless there is "an unambiguous congressional mandate to that effect." *Florida Lime & Avocado Growers, Inc. v. Paul*, 373 U.S. 132, 146, 83 S.Ct. 1210, 1219, 10 L.Ed.2d 248 (1963). *See also Hillsborough County v. Automated Medical Laboratories, Inc.*, 471 U.S. 707, 715, 105 S.Ct. 2371, 2376, 85 L.Ed.2d 714 (1985); *Jones v. Rath Packing Co.*, 430 U.S. 519, 525, 97 S.Ct. 1305, 1309, 51 L.Ed.2d 604 (1977).

Preemption "always boils down to a matter of congressional intent." *Connolly*, 883 F.2d at 1115. *See also Louisiana Public Service Comm'n v. FCC*, 476 U.S. 355, 369, 106 S.Ct. 1890, 1899, 90 L.Ed.2d 369 (1986) ("The critical question in any preemption analysis is always whether Congress intended that federal regulation supersede state law."); *Metropolitan Life Ins. Co. v. Massachusetts*, 471 U.S. 724, 747, 105 S.Ct. 2380, 2393, 85 L.Ed.2d 728 (1985) ("in any pre-emption analysis, '[t]he purpose of Congress is the ultimate touchstone.' ") (citations omitted); *Associated Industries of Massachusetts v. Snow*, 898 F.2d 274, 278 (1st Cir.1990) (same). The task of interpretation is simplified substantially, of course, whenever "Congress has made its intent known through explicit statutory language." *English v. General Electric Co.*, ___ U.S. ___, 110 S.Ct. 2270, 2275, 110 L.Ed.2d 65 (1990).

Absent express preemption, the challenged state law must yield when it

> regulates conduct in a field that Congress intended the Federal Government to occupy exclusively. Such an intent may be inferred from a 'scheme of federal regulation . . . so pervasive as to make reasonable the inference that Congress left no room for the States to supplement it,' or where an Act of Congress 'touch[es] a field in which the federal interest is so dominant that the federal system will be assumed to preclude enforcement of state laws on the same subject.'

English, 110 S.Ct. at 2275 (citations omitted). Finally, preemption will be inferred where the state law "actually conflicts with federal law." *Id.* Such a conflict arises where it is physically impossible to comply with both the federal and the state law or where "state law 'stands as an obstacle to the accomplishment and execution of the full purposes and objectives of Congress.' " *Id.* (citation omitted). *See also International Paper Co.*, 479 U.S. at 491-92, 107 S.Ct. at 811; *Louisiana Public Service Comm'n*, 476 U.S. at 368-69, 106 S.Ct. at 1898-99; *Hillsborough County*, 471 U.S. at 713, 105 S.Ct. at 2375.

Shell contends that OSHA preempts all the state-created rights and remedies underpinning Pedraza's claims, since the adjudication of private rights arising under state law would result in the imposition of prospective normative constraints on the manufacture and distribution of ECH. We address Shell's preemption claim by first examining in context the language of the OSHA preemption provisions. A sound statutory interpretation must encompass the relevant text as well as the structure

and context of the enactment. We will " 'not be guided by a single sentence or member of a sentence, but look to the provisions of the whole law. . . . ' " *Philbrook v. Glodgett*, 421 U.S. 707, 713, 95 S.Ct. 1893, 1898, 44 L.Ed.2d 525 (1975) (quoting *United States v. Heirs of Boisdore*, 49 U.S. (8 How.) 113, 122, 12 L.Ed. 1009 (1849)). *See also Richards v. United States*, 369 U.S. 1, 11, 82 S.Ct. 585, 591-92, 7 L.Ed.2d 492 (1962) ("a section of a statute should not be read in isolation from the context of the whole Act.").

The scope of OSHA preemption is outlined in two sections: (i) section 18,[4] which represents a general statement of preemptive intent, and (ii) section 4(b)(4), the "savings clause," which excepts from preemption a spectrum of state laws.

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[4] OSHA § 18 provides as follows:

> (a) Nothing in this Act shall prevent any State agency or court from asserting jurisdiction under State law over any occupational safety or health issue with respect to which no standard is in effect under section 655 of this title. (b) Any State which, at any time, desires to assume responsibility for development and enforcement therein of occupational safety and health standards relating to any occupational safety or health issue with respect to which a Federal standard has been promulgated under section 655 of this title shall submit a State plan for the development of such standards and their enforcement.

29 U.S.C. § 667(a), (b) (1982).

(i) Section 18

At its outer reaches section 18 preemption does not obtain unless there is an unapproved assertion of "jurisdiction under State law over any occupational safety or health issue" as to which a federal "standard" is already in place. *See* 29 C.F.R. 1901.2 ("Section 18(a) of the Act is read as preventing any State agency or court from asserting jurisdiction under State law over any occupational safety or health *issue* with respect to which a Federal standard has been issued under section 6 of the Act.") (emphasis added); *Associated Industries of Massachusetts*, 898 F.2d at 278 (Section 18 "provides that if a federal standard on an occupational safety or health issue is in effect, a state cannot promulgate an occupational safety or health standard relating to that issue, unless it first submits the state plan to OSHA for approval."). *See also Puffer's Hardware Inc. v. Donovan*, 742 F.2d 12, 16 (1st Cir.1984); *National Solid Wastes Management Ass'n v. Killian*, 918 F.2d 671, 677-78 (7th Cir.1990).

Section 3 in turn defines an occupational safety and health "standard" as one which "requires conditions, or the adoption or use of one or more practices, means methods, operations, or processes, reasonably necessary or appropriate to provide safe or healthful employment and places of employment." 29 U.S.C. § 652(8) (1982); *see also People v. Chicago Magnet Wire Corp.*, 126 Ill.2d 356, 128 Ill.Dec. 517, 520, 534 N.E.2d 962, 965 (§ 18 precludes "a State's development and enforcement of 'occupational health and safety standards.' ") (discussing OSHA preemption of State criminal laws) (citations omitted), *cert. denied*, ___ U.S. ___, 110 S.Ct. 52, 107 L.Ed.2d 21 (1989). Thus, it is not surprising that substantial authority exists

for the view that section 18 preempts the unapproved establishment of state standards and regulatory schemes in competition with OSHA, *see, e.g., Environmental Encapsulating Corp. v. City of New York*, 855 F.2d 48, 55 (2d Cir.1988); *New Jersey State Chamber of Commerce v. Hughey*, 774 F.2d 587, 592-93 (3d Cir.1985), *appeal after remand*, 868 F.2d 621 (3d Cir.), *cert. denied*, 492 U.S. 920, 109 S.Ct. 3246, 106 L.Ed.2d 593 (1989), but that there is no authority for the view that OSHA preempts provisions of state law of the sort relied on by Pedraza.

We are aware of no case which holds that OSHA preempts state tort law. Rather, most courts have been concerned with how OSHA affects tort actions, not with whether it preempts state tort law. Thus, every court faced with the issue has held that OSHA creates no private right of action. *See, e.g., Pratico v. Portland Terminal Co.*, 783 F.2d 255, 266 (1st Cir.1985) ("The legislative history of § 653(b)(4) shows that the intent of the provision was merely to ensure that OSHA was not read to create a private right of action for injured workers which would allow them to bypass the otherwise exclusive remedy of workers' compensation."). We have embraced the majority view that the regulations promulgated under OSHA prescribe standards of care relevant in common law negligence actions. *Id.* at 263-65; *see also Albrecht v. Baltimore & Ohio R.R. Co.*, 808 F.2d 329, 332 (4th Cir.1987); *but see Minichello v. U.S. Industries, Inc.*, 756 F.2d 26, 29 (6th Cir.1985) ("To use OSHA regulations to establish whether a product is unreasonably dangerous is . . . improper.") (product liability action brought by employer against product supplier).

While we discern in OSHA's language, structure and context a clear congressional signal that section 18 preempts unapproved assertions of state jurisdiction in the development and enforcement of standards relating to occupation health and safety issues in competition with federal standards, we find no warrant whatever for an interpretation which would preempt enforcement in the workplace of private rights and remedies traditionally afforded by state laws of general application.[5] Connecticut's accustomed maintenance of judicial fora for the enforcement of private rights in the workplace, under State laws of general application, seems to us a function

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[5] The great majority of courts which have considered the issue holds that state criminal laws of general application are not preempted by OSHA, despite their normative impact. *See National Solid Wastes Management Ass'n*, 918 F.2d at 680 n. 9 (collecting cases). The New York Court of Appeals, for instance, recently ruled that OSHA does not so occupy the occupational health and safety field as to preempt by implication enforcement in the workplace of State criminal laws of general application. People v. Pymm, 76 N.Y.2d 511, 561 N.Y.S.2d 687, 691, 563 N.E.2d 1, 5 (1990) (relying on OSHA §§ 4(b)(4) and 18), *cert. denied*, ___ U.S. ___, 111 S.Ct. 958, 112 L.Ed.2d 1046 (1991). The court reasoned that State criminal laws of general application are "expost, reactive measures, focusing on conduct after an injury has occurred," and do not fit within the definition of "standard" (*viz*, "ex ante, prophylactic measures prescribing or proscribing specific practices"). *Id.* Likewise, the private rights and remedies implicated by Pedraza's claims against Shell hardly qualify as "standards," within the meaning of section 3, since they too are more "ex post, reactive" than prescriptive or normative. *See also National Solid Wastes Management Ass'n*, 918 F.2d at 680 n. 9 (tort laws "are not 'standards' within the meaning of 29 U.S.C. section 652(8).").

far less prophylactic than reactive; less normative than compensatory; and less an arrogation of regulatory jurisdiction over an "occupational safety or health issue" than a neutral forum for the orderly adjustment of private disputes between, among others, the users and suppliers of toxic substances.

(ii) Section 4(b)(4)

We are persuaded that Congress, by its enactment of the "savings clause," further evinced its intention to spare these provisions of State law from preemption.

> Nothing in this Act shall be construed to supersede or in any manner affect any workmen's compensation law *or* to enlarge or diminish or affect in any other manner the common law or statutory rights, duties, or liabilities of employers and employees under any law with respect to injuries, diseases, or death of employees arising out of, or in the course of, employment.

29 U.S.C. § 653(b)(4) (1982) (emphasis added).[6]There is a solid consensus that section 4(b)(4) operates to save state

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[6] We are unpersuaded by Shell's *ejusdem generis* argument, which would render § 4(b)(4) inapposite to the provisions of Connecticut law on which Pedraza relies. Shell argues that only those state laws which are in the nature of workers' compensation laws come within the scope of the savings clause. Its argument implicitly assumes that though traditional private rights and remedies between employer and employee arising under state law are expressly saved from preemption by § 4(b)(4), those private rights and remedies which have a much less direct connection with the workplace were meant,

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tort rules from preemption. *See, e.g., National Solid Wastes Management Ass'n*, 918 F.2d at 680 n.9 (collecting cases). *See also Atlas Roofing Co. v. Occupational Safety Comm'n*, 430 U.S. 442, 445, 97 S.Ct. 1261, 1264, 51 L.Ed.2d 464 (1976) (noting that OSHA establishes a new statutory duty on the part of employers and creates new remedies; and stating: "Each remedy exists whether or not an

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for some unarticulated reason, to be preempted. We are unable either to ascribe a plausible reason for such a result or to discern such a congressional intent. Having seen no reason to preempt existing state law rights and remedies between employer and employee – the principal participants in the workplace, and the *only* parties whose relationship is regulated by OSHA, *McKinnon v. Skil Corp.*, 638 F.2d 270, 275 (1st Cir.1981) (OSHA's "terms apply only to employers") (citation omitted) – Congress almost certainly did not intend to preempt, *sub silentio*, the right of an employee to bring an action for damages against a third-party supplier of products used in the workplace. *See infra* note 7. We would be very reluctant to infer preemptive intent absent some indication that the state law could have a significant adverse regulatory impact on OSHA's mission in the workplace.

Section 4(b)(4) plainly expresses Congress' intention to preserve workers' compensation laws and the rights and duties of employers and employees under state laws relating to injuries, disease or death arising in the course of employment. Nevertheless, notwithstanding that Connecticut statutory law preserves Pedraza's right to sue Shell in these circumstances, *see* Conn.Gen.Stat.Ann. § 31-2939(a), under Shell's view Pedraza's right to seek private redress for workplace injury or disease allegedly caused by the employer's ECH supplier would be preempted. Shell cannot insist simultaneously that § 4(b)(4)'s reference to workers' compensation laws modifies the scope of the savings clause *and* does so more restrictively than the workers' compensation law itself.

employee is actually injured or killed as a result of the [unsafe or unhealthful] condition, and existing state statutory and common-law remedies for actual injury and death remain unaffected." (dictum)); *Chicago Magnet Wire Corp.*, 128 Ill.Dec. at 523, 534 N.E.2d at 968 ("Congress expressly stated that OSHA was not intended to preempt two bases of liability that, like criminal law, operate to regulate workplace conduct and implicitly set safety standards-State worker's compensation and tort law.") (criminal laws).[7] *See generally*, Note, *The Extent of OSHA Preemption of State Hazard Reporting Requirements*, 88 Colum.L.Rev. 630, 641 (1988)(§ 4(b)(4) reveals "Congress' explicit recognition of the continued validity of state

[7] Although OSHA prescribes various criminal and civil penalties against employers who violate either the regulations or the general duty to provide a safe workplace, *see id.* § 666 (1982), the overriding purpose of OSHA is to *prevent* workplace injuries, not to impose penalties on employers who fail to provide their employees with safe working conditions. *See Whirlpool Corp. v. Marshall*, 445 U.S. 1, 12, 100 S.Ct. 883, 890, 63 L.Ed.2d 154 (1980) (OSHA "is prophylactic in nature. The Act does not wait for an employee to die or become injured. It authorized the promulgation of health and safety standards . . . in the hope that these will act to prevent deaths or injuries from ever occurring.") (citations omitted).

It is noteworthy as well that OSHA provides no replacement remedy for workplace injuries, disease or death caused to employees by suppliers of products used in the workplace. As the Supreme Court has noted, "[i]t is difficult to believe that Congress would, without comment, remove all means of judicial recourse for those injured by illegal conduct." *Silkwood*, 464 U.S. at 251, 104 S.Ct. at 623.

worker compensation and tort remedies. . . . "); Note, *Getting away with Murder: Federal OSHA Preemption of State Criminal Prosecutions for Industrial Accidents*, 101 Harv.L.Rev. 535, 543 (1987) ("Indeed, section 4(b)(4) saves from preemption two forms of liability that, like criminal law, regulate workplace conduct and set implicit standards-state workers' compensation and tort law.").[8]

Thus, we are unpersuaded that the provisions of Connecticut law undergirding Pedraza's claims against Shell are eclipsed by OSHA.

B. *Shell's Cross-Appeal*

Shell cross-appeals the district court order denying its motion for summary judgment on the ground that Pedraza's claims are time-barred and, alternatively, that it discharged its duty to warn under the so-called "sophisticated user" defense. An order denying summary judgment is not immediately appealable unless it comes within an exception to the "final judgment" rule. The United States Supreme Court puts it plainly:

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[8] What little legislative history we have discovered leaves even less doubt that § 4(b)(4) evinces a congressional intent to preserve state tort law from preemption. In a letter to the Chairman of the House Subcommittee on Labor, the Solicitor of Labor explained that OSHA "would in no way affect the present status of the law with regard to workmen's compensation legislation or *private tort actions.*" *Pratico*, 783 F.2d at 266 (quoting Occupational Health and Safety Act of 1969: Hearings on H.R. 843, H.R. 3809, H.R. 4294, and H.R. 13373 before Select Subcomm. on Education and Labor, 91st Cong., 1st Sess., Pt. 2, at 1592-93 (letter of L.H. Silberman, Solicitor of Labor) (emphasis added)).

> We hold that a district court's order denying a motion to disqualify counsel is not appealable under § 1291 prior to final judgment in the underlying litigation. Insofar as the Eighth Circuit reached this conclusion, its decision is correct. But because its decision was contrary to precedent in the Circuit the court went further and reached the merits of the order appealed from. This approach, however, overlooks the fact that *the finality requirement embodied in § 1291 is jurisdictional* in nature. If the appellate court finds that the order from which a party seeks to appeal does not fall within the statute, its inquiry is over. A court lacks discretion to consider the merits of a case over which it is without jurisdiction, and thus, by definition, a jurisdictional ruling may never be made prospective only. We therefore hold that because the Court of Appeals was without jurisdiction to hear the appeal, it was without jurisdiction to decide the merits.

Firestone Tire & Rubber Co. v. Risjord, 449 U.S. 368, 379, 101 S.Ct. 669, 676, 66 L.Ed.2d 571 (1981) (emphasis added) (footnotes omitted).[9]

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[9] The Seventh Circuit has dealt in similar fashion with an order denying a motion for summary judgment based on an affirmative defense.

> As to appellant's contention that the denial of its motion for summary judgment should be presently appealable as it constituted a denial of a 'claim of right' founded on the statutory immunity from indemnification, the obvious reply is that *denials of*

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The interlocutory orders challenged on Shell's cross-appeal are not within any exception to the final judgment rule and implicate no issue related to the resolution of the appeal from the final order granting Shell's motion for summary judgment on the preemption ground.[10] We therefore conclude that Shell's cross-appeal must be dismissed.

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> *summary judgment are interlocutory decrees, not appealable,* irrespective of the burden of having to go to trial. *Pacific U. Conference, Etc. v. Marshall,* 434 U.S. 1305, 98 S.Ct. 2, 54 L.Ed.2d 17 (1977); *United States v. Florian,* 312 U.S. 656, 61 S.Ct. 713, 85 L.Ed. 1105, *reh. denied,* 312 U.S. 715, 61 S.Ct. 738, 85 L.Ed. 1145 (1941). There is nothing peculiar in the asserted 'claim of right' as compared to every other right where the denial of summary judgment is not appealable. Appellant's assertion of the applicability of the Georgia statute is nothing more than an assertion of an affirmative defense whose denial is also not appealable. *Smith v. Benedict,* 279 F.2d 211 (7th Cir.1960); *County of Hennepin v. Aetna Gas & Sur. Co.,* 587 F.2d 945 (8th Cir.1978).

Freeman v. Kohl & Vick Machine Works, Inc., 673 F.2d 196, 200 (7th Cir.1982) (emphasis added) (footnotes omitted).

[10] Thus, even when presented with an interlocutory appeal from an order denying summary judgment on the ground of qualified immunity, we have so far refrained from endorsing any form of pendent appellate jurisdiction over otherwise nonappealable interlocutory orders. *Roque-Rodriguez v. Lema Moya*, 926 F.2d 103, 105 n.2 (1st Cir. 1991) ("To date, this circuit has refrained from attempting to exercise 'pendent appellate jurisdiction over matters beyond those bound up in the qualified immunity inquiry.' *See Morales v. Ramirez*, 906 F.2d

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The judgment of the district court is vacated and the case is remanded for further proceedings. Costs are awarded to plaintiffs-appellants.

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784, 787 n.2 (1st Cir.1990)."). The "policy against piecemeal review is preserved" by careful adherence to the "final judgment" rule. *See, e.g., Makuc v. American Honda Motor Co.*, 692 F.2d 172, 173-74 (1st Cir.1982) (per curiam) (declining to review district court's denial of the rule 54(b) certification of interlocutory order); *Roque-Rodriguez*, 926 F.2d at 105 (" 'Notwithstanding that we have jurisdiction to review the denial of qualified immunity midstream, [a]ny additional claim presented to and rejected by the district court must independently satisfy the collateral-order exception to the final-judgment rule in order for us to address it on an interlocutory appeal.' " *Domegan [v. Fair]*, 859 F.2d [1059,] 1061-62 [(1st Cir.1988)] quoting *Bonitz v. Fair*, 804 F.2d 164, 173 (1st Cir.1986)."); *Morales v. Ramirez*, 906 F.2d 784, 787 (1st Cir. 1990) ("We have recognized before that, in certain cases, some aspect of the merits may be 'inexorably intertwined with the issue of qualified immunity. *Unwin [v. Campbell]*, 863 F.2d [124,] 133 n.9 [(1st Cir.1988)].").

APPENDIX 2

CRUZ PEDRAZA, et al., Plaintiffs,

v.

SHELL OIL COMPANY, Defendant.

Civ. A. No. 85-0421-F.

United States District Court,
D. Massachusetts.

Jan. 25, 1990.

Worker who was injured as alleged result of exposure to epichlorohydrin (ECH) brought products liability action against defendant on "failure to warn" theory. On defendant's motion to dismiss, the District Court, Freedman, Chief Judge, held that "failure to warn" claim arising out of worker's exposure to ECH was preempted by federal standards regarding exposure to ECH promulgated under the Occupational Safety and Health Act (OSHA).

Motion granted.

Frank R. Saia and Edward V. Leja, Springfield, Mass., for plaintiffs.

Burt Ballanfant, Shell Oil Co., Houston, Tex., Robert Leonard and Barry Ryan, Springfield, Mass., for defendant.

MEMORANDUM AND ORDER

FREEDMAN, Chief Judge.

I. INTRODUCTION

Before the Court is defendant Shell Oil Company's ("Shell") motion that this Court certify an interlocutory appeal to the First Circuit Court of Appeals on Shell's argument that plaintiff Cruz Pedraza's ("Pedraza") claim is barred by the statute of limitations. Pedraza has filed an opposition to Shell's motion.

Also before the Court is Shell's motion to dismiss this lawsuit for lack of jurisdiction, asserting that any state law claims of the plaintiff are preempted by explicit federal health standards. Pedraza opposes the motion to dismiss, and has asked this Court to either strike Shell's motion or defer judgment until trial. As Shell's motion to dismiss based on preemption is dispositive, the Court will turn its attention in that direction first.

II. PREEMPTION

A. Procedural Background

The first mention of the defendant's preemption argument was made in Shell's objections to United States Magistrate Ponsor's recommendation that Shell's earlier motion for summary judgment be denied. *Pedraza v. Shell Oil Co.*, C.A. No. 85-0421-F (D.Mass. March 15, 1989). Before the Magistrate, Shell argued that summary judgment was appropriate because the statute of limitations had run on the plaintiff, and also that Shell was entitled to use the "sophisticated user" defense under Connecticut law. In objections subsequently filed in this Court,

Shell claimed that it had also argued that Pedraza's state law claims were preempted by specific Occupational Safety and Health Act ("OSHA") standards regarding exposure to epichlorohydrin ("ECH").

After carefully reviewing Shell's briefs before the Magistrate, this Court concluded that preemption had not been argued below, and held that Shell had waived the preemption argument by failing to raise it earlier. *Pedraza v. Shell Oil Co.*, 724 F.Supp. 1, 3-4 (D.Mass.1989).

In a separate motion filed December 15, 1989, Shell agrees that it did not raise the preemption argument before the Magistrate, and that this Court, sitting in an appellate capacity, was justified in not addressing it at the time. However, Shell disputes this Court's ruling that the preemption argument is waived, arguing instead that preemption is a question of subject matter jurisdiction, which cannot be waived. As the plaintiff himself concedes, Shell's view is accurate. *See International Longshoremen's Association, AFL-CIO v. Davis*, 476 U.S. 380, 398-399, 106 S.Ct. 1904, 1016, 90 L.Ed.2d 389 (1986) (Alabama Supreme Court erred in holding that ILA had waived preemption claim through non-compliance with state procedural rules). The Court now turns to the substance of Shell's preemption argument.

B. OSHA Standards

The gist of Shell's argument is that the Occupational Safety and Health Act, 29 U.S.C. §§ 651 *et seq.*, expressly divests this Court of jurisdiction over state law "failure to warn" claims by establishing federal standards which serve to preempt state authority. Upon review of the

material submitted by Shell, the Court finds that this position is well supported.

Article I, § 8, cl. 3 of the United States Constitution states that "[t]he Congress shall have Power . . . [t]o regulate commerce . . . among the several states." Where Congress chooses to exercise its power to regulate commerce, conflicting state laws must give way. As the Supreme Court wrote in *Silkwood v. Kerr-McGee Corp.*, 464 U.S. 238, 104 S.Ct. 615, 78 L.Ed.2d 443 (1984),

> If Congress evidences an intent to occupy a given field, any state law falling within that field is preempted. If Congress has not entirely displaced state regulation over the matter in question, state law is still preempted to the extent that it actually conflicts with federal law, that is, when it is impossible to comply with both state and federal law . . . , or where state law stands as an obstacle to the accomplishment of the full purposes and objectives of Congress.

Id. at 248, 104 S.Ct. at 621 (citations omitted).

In this case, it is clear that Congress did intend to occupy a significant portion of the occupational health and safety field. This intent can be derived from the words of the Act itself; 29 U.S.C. § 667(a) provides in relevant part:

> **(a) Assertion of State standards in absence of applicable Federal standards.** Nothing in this chapter shall prevent any State agency or court from asserting jurisdiction under State law over any occupational safety or health issue with respect to which no standard is in effect under section 6 [29 U.S.C. § 655].

See also 29 C.F.R. § 1901.2 (interpreting 29 U.S.C. § 667(a) as preventing State court jurisdiction in the presence of applicable federal standards). As one court has noted, section 667(a) "has consistently been interpreted by OSHA and the courts to bar the exercise of state jurisdiction over issues addressed by the OSHA standard. . . ." *N.J. State Chamber of Commerce v. State of N.J.*, 653 F.Supp. 1453, 1464 (D.N.J.1987).

However, as is also evident from the language of 29 U.S.C. § 667(a), Congress did not intend to wholly supplant state regulation, since allowance is made for any state law or regulation pertaining to areas for which no federal standard has been promulgated. *See, e.g., Puffer's Hardware, Inc. v. Donovan*, 742 F.2d 12, 16 (1st Cir.1984) (OSHA did not preempt Massachusetts law exempting certain elevators from state regulation in the absence of applicable OSHA standard).

Since OSHA only preempts state law to the extent that there is an applicable federal standard, the question now before the Court is whether or not the federal government had promulgated standards regarding exposure to ECH prior to the time of the plaintiff's exposure.

C. *The Federal Government Has Promulgated Epichlorohydrin Exposure Standards*

In a table promulgated on June 27, 1974, and amended on May 28, 1975, the Secretary for the Department of Labor set the following exposure limits for ECH; five (5) parts per million parts of contaminated air, or nineteen (19) milligrams of particulate per cubic meter of air. *See* 29 C.F.R. § 1910.1000, Table Z-1. The Secretary has

also laid out comprehensive regulations regarding personal protective equipment which should be used when handling hazardous materials. *See* 29 C.F.R. §§ 1910.132, 1910.133, 1910.134.

The facts illustrate that Pedraza's exposure to ECH began at some time during 1977,[1] by which time the Secretary had already promulgated the federal standards regarding exposure to that chemical. As a result, this Court must now conclude that the plaintiff's Connecticut common law claims with respect to Shell's "failure to warn" are preempted by the federal action in this area. Since this Court is sitting solely in diversity as a Connecticut state court, it must now conclude that it lacks subject matter jurisdiction to hear this suit.

III. CONCLUSION

For the reasons set forth above, the defendant Shell's motion to dismiss for lack of subject matter jurisdiction is ALLOWED. Having determined that it lacks subject matter jurisdiction to act in this matter, the Court hereby concludes that it has no authority to rule on any pending motions before it. The Clerk of Court is ordered to enter judgment for the defendant.

It is So Ordered.

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[1] For a full explication of the facts, see this Court's prior order. *Pedraza v. Shell Oil Co.*, 724 F.Supp. 1, 5-6 (D.Mass.1989).

APPENDIX 3

Cruz PEDRAZA, et al., Plaintiffs,

v.

SHELL OIL COMPANY, Defendant.

Civ. A. No. 85-0421-F.

United States District Court,
D. Massachusetts.

Nov. 13, 1989.

Chemical manufacturer that had been sued by worker who claimed that his lungs were permanently damaged as result of inhaling chemical filed objections to recommendation of magistrate that its motion for summary judgment be denied. The District Court, Freedman, Chief Judge, held that: (1) material fact issue existed with respect to Massachusetts discovery rule as it related to statute of limitations defense, and (2) sophisticated user defense was not available in toxic tort suit governed by Connecticut law.

Magistrate's report and recommendation adopted; motion for summary judgment denied.

Frank R. Saia, Edward V. Leja, Springfield, Mass., for plaintiffs.

Burt Ballanfant, Shell Oil Co., Houston, Tex., Robert Leonard, Barry Ryan, Springfield, Mass., for Shell Oil Co.

MEMORANDUM AND ORDER

FREEDMAN, Chief Judge.

I. INTRODUCTION

Before the Court is defendant Shell Oil Company's ("Shell") objections to Magistrate Michael Ponsor's March 15, 1989 Report and Recommendation that Shell's motion for summary judgment be denied. The plaintiff[1] Cruz Pedraza ("Pedraza") disagrees with Shell's objections, and urges this Court to adopt the Magistrate's recommendation. Shell has filed a response to the plaintiff's memorandum.

II. BACKGROUND

This is a diversity action, in which Pedraza is claiming that "his lungs were permanently damaged as a result of inhaling the chemical epichlorohydrin ('ECH') while employed by defendant United Technologies Corporation, Power Systems Division ('U.T.C.')." Magistrate's Report and Recommendation Regarding Defendant Shell Oil Company's Motion for Summary Judgment ("Magistrate's Report") at 1. The plaintiff originally filed suit on November 4, 1985 against his employer and two chemical manufacturers, Shell and Dow Chemical ("Dow"), alleging assorted theories of negligence, including negligent design, manufacture, and distribution, as well as strict liability and breach of implied warranties. Magistrate's Report at 2. On March 2, 1987, this Court accepted the Magistrate's recommendation that U.T.C.

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[1] Also plaintiffs in this case are Cruz Pedraza's wife, Alejandrina, and his two children, Roberto and Mary Ellen. The Court's discussion focuses on Mr. Pedraza alone, as the other plaintiffs' claims rise and fall on the strength of his cause of action.

be dismissed from the case and, on October 5, 1987, that Dow be dismissed as well, leaving Shell the only defendant in this suit. Magistrate's Report at 2-3.

Shell's current motion for summary judgment is in fact its second attempt to extricate itself from this lawsuit. The company's original motion for summary judgment was dismissed without prejudice by this Court on March 2, 1987. The parties then engaged in extensive further discovery. Alleging new evidence and new Massachusetts case law, Shell moved again for summary judgment on June 24, 1988. As grounds for its motion, Shell made two separate arguments: 1) that the statute of limitations bars the plaintiff's action, and 2) that Pratt and Whitney, the owner of U.T.C., should be considered a "sophisticated user" of ECH, thereby relieving Shell of any liability.

Based in part on the facts as he found them in his February 13, 1987 Report and Recommendation that Shell's initial motion be denied, and in part on the additional facts uncovered during discovery, the Magistrate again recommends to this Court that Shell's motion for summary judgment be denied. For the reasons set forth below, the Court hereby adopts the Magistrate's recommendation.

III. DISCUSSION

A. Applicable Legal Standards

1. Review of Magistrate Ponsor's Report and Recommendation

This matter was referred to the Magistrate for a report and recommendation pursuant to the provisions of

28 U.S.C. § 636(b)(1)(B).[2] That section further provides that "[a] judge of the court shall make a *de novo* determination of those portions of the report or specified proposed findings or recommendations to which objection is made." 28 U.S.C. § 636(b)(1).

In construing the terms of section 636(b)(1), the Supreme Court has held that a district court need not hold a *de novo* hearing in order to satisfy the requirement of a "*de novo* determination." *United States v. Raddatz*, 447 U.S. 667, 674, 100 S.Ct. 2406, 2411, 65 L.Ed.2d 424 (1980); *see also Gioiosa v. United States*, 684 F.2d 176, 178-79 (1st Cir.1982) (a district court need not hold a brand new hearing to satisfy the *de novo* standard of review). To require a brand new hearing, the Supreme Court said, "would largely frustrate the plain objective of Congress to alleviate the increasing congestion of litigation in the district courts. *Raddatz*, 447 U.S. at 676 n. 3, 100 S.Ct. at 2412 n. 3.

Instead, it is sufficient that the district court review the transcript or tape of the Magistrate's hearing in sufficient detail to make its own determination with regard to

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[2] 28 U.S.C. § 636(b)(1)(B) provides in relevant part as follows:

> (b)(1) Notwithstanding any provisions of law to the contrary –
>
> > (B) a judge may also designate a magistrate to conduct hearings, including evidentiary hearings, and to submit to a judge of the court proposed findings of fact and recommendations for the disposition, by a judge of the court, of any motion excepted in subparagraph (A). . . .

each disputed factual finding. *See generally Gioiosa*, 684 F.2d at 178 and cases cited; *see also LoConte v. Dugger*, 847 F.2d 745, 750 (11th Cir.), *cert. denied*, ___ U.S. ___, 109 S.Ct. 397, 102 L.Ed.2d 386 (1988) ("To the extent that the magistrate has made findings of fact based upon the testimony of the witnesses heard before the magistrate, the district court is obligated to review the transcript or listen to the tape-recording of those proceedings").

Shell does not challenge the Magistrate's findings of fact *per se*. Instead, Shell questions the conclusion that the Magistrate reached based on those facts, in light of the relevant legal standards discussed below. The First Circuit has held that the requirement of a "*de novo* determination" only applies to the Magistrate's factual findings; "issues of a 'technical, legal' nature presented to a magistrate are 'certainly . . . amenable to disposition [by the district court] by appellate type briefing and argument.' " *Gioiosa*, 684 F.2d at 179, *quoting United States v. Southern Tanks, Inc.*, 619 F.2d 54, 56 (10th Cir.1980). In light of the fact that the Magistrate's purely factual findings are largely unassailed, this Court's obligation to review the tape of the hearing is substantially reduced. Where necessary, however, the Court has independently examined the documentary evidence in the record upon which Shell relies.

2. Summary Judgment Standard

Pursuant to the provisions of Fed.R.Civ.P. 56(c), this Court has an obligation to grant a motion for summary

judgment "if the pleadings, depositions, answers to interrogatories, and admissions on file, together with the affidavits, if any, show that there is no genuine issue as to material fact. . . . "

In order to avoid the imposition of summary judgment, Pedraza must persuade this Court that there is a dispute about "facts that might affect the outcome of the suit under the governing law. . . . " *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 248, 106 S.Ct. 2505, 2510, 91 L.Ed.2d 202 (1986). In addition, Pedraza must also show that the dispute about the facts is genuine, that is, that "a fair-minded jury could return a verdict for the plaintiff on the evidence presented." *Id.* at 252, 106 S.Ct. at 2512.

In weighing the evidence before it to determine if it is more than a "scintilla," *id.*, or "mere allegations," Fed.R.Civ.P. 56(e), this Court has a duty to " 'look at the record in . . . the light most favorable to . . . the party opposing . . . the motion' . . . [and] indulge all inferences favorable to the party opposing the motion." *Hahn v. Sargent*, 523 F.2d 461, 464 (1st Cir.1975), *quoting Poller v. Columbia Broadcasting System*, 368 U.S. 464, 82 S.Ct. 486, 7 L.Ed.2d 458 (1962). "If, after this canvassing of the material presented, the district court finds that *some* genuine factual issue remains in the case, whose resolution one way or another *could* affect its outcome, the court must deny the motion." *Lipsett v. University of Puerto Rico*, 864 F.2d 881, 895 (1st Cir.1988) (emphasis in the original).

The standard for granting summary judgment is even stricter in instances where, as is the case here, the material fact in question involves a party's state of mind.

"State of mind is difficult to prove and great circumspection is required where summary judgment is sought on an issue involving state of mind." *Hahn*, 523 F.2d at 468.

B. The Defendant's Preemption Argument Has Been Waived

As a preliminary matter, the Court addresses Shell's contention that Occupation Safety and Health Administration ("OSHA") standards for the inhalation exposure to ECH preempt Connecticut standards, and that accordingly, Pedraza's common law claims against Shell for failure to warn are barred. *See* Shell's Notice of Appeal From and Objection to the Report and Recommendation of the Magistrate at 10-13, and Defendant Shell Oil Company's Response to Plaintiff's Reply Memorandum at 1-6. The plaintiff argues that Shell has waived any preemption argument, since it did not raise it before the Magistrate. Plaintiff's Reply Memorandum to Defendant, Shell Oil Company's Objection to Report and Recommendation of Magistrate Ponsor Re: Shell's Motion for Summary Judgment at 1.

As the First Circuit has said, "[p]arties must take before the magistrate, 'not only their "best shot" but all of their shots.' " *Borden v. Secretary of Health and Human Services*, 836 F.2d 4, 6 (1st Cir.1987), *quoting Singh v. Superintending School Committee of the City of Portland*, 593 F.Supp. 1315, 1318 (D.Me.1984) ("[f]ailure to make an

argument . . . constitutes its waiver for purposes of further appellate review of the Magistrate's action").[3]

The Court has carefully reviewed both of Shell's motions for summary judgment, and concludes that the plaintiff is correct. The Court finds that the defendant did not raise the issue of preemption before the Magistrate, and accordingly, has waived the defense. To the extent that Shell has raised the issue of the impact of various OSHA standards on this litigation, it has done so in the context of whether or not Pratt and Whitney had or should have had express or implied knowledge of the potential effects of ECH, and not in terms of the preemptive effect such standards might have on the plaintiff's common law claims.

C. *The Statute of Limitations Does Not Bar This Action*

1. Statute of Limitations in Product Liability Cases

The crux of Shell's summary judgment motion is that Pedraza's claim is barred by the Massachusetts statute of limitations, which is made applicable to this dispute by the principles of diversity jurisdiction. *See Guaranty Trust Co. v. York*, 326 U.S. 99, 65 S.Ct. 1464, 89 L.Ed. 2079, *rehearing denied*, 326 U.S. 806, 66 S.Ct. 7, 90 L.Ed. 491

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[3] Shell attempts to evade waiver of this argument by stating that the First Circuit decision in *Wood v. General Motors Corp.*, 865 F.2d 395 (1st Cir.1988), represents "significant modern analysis" of the effect of the preemption doctrine on common law tort claims. Regardless of how recently the First Circuit has visited the issue, however, Shell is still not excused from its failure to raise the issue in some coherent form before the Magistrate.

(1945); *Buckley v. American Honda Motor Company, Inc.*, 780 F.2d 1 (1st Cir.1985); *Hemric v. Reed & Prince Mfg. Co.*, 739 F.2d 1, 2 (1st Cir.1984) (regardless of the choice of substantive law, the court must apply the procedural statute of limitations of the forum state).

For both Pedraza's negligence and breach of warranty claims, the statute of limitations is three years. *See* Mass.Gen.Laws Ann. ch. 260, § 2A[4] and Mass.Gen.Laws Ann. ch. 106, § 2-318,[5] respectively. The more difficult question, and the salient issue in this case, is exactly when the statute of limitations began to run with respect to the plaintiff's claim. Since the statutes themselves do not state the point at which they begin to run, the fixing of the inception of the statute of limitations in a given case is a determination for the Court to make. *Olsen v. Bell Telephone Laboratories, Inc.*, 388 Mass. 171, 445 N.E.2d 609, 611 (Mass.1983).

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[4] Mass.Gen.Laws Ann. ch. 260, § 2A (1988 supp.) provides as follows:

> Except as otherwise provided, actions of tort, actions of contract to recover for personal injuries, and actions of replevin, shall be commenced only within three years next after the cause of action accrues.

[5] Mass.Gen.Laws Ann. ch. 106, § 2-318 (1988 supp.) provides in relevant part as follows:

> Lack of privity between plaintiff and defendant shall be no defense in any action brought against the manufacturer, seller, lessor or supplier of goods to recover damages for breach of warranty. . . . All actions under this section shall be commenced with three years next after the date the injury and damage occurs.

The job of determining when the statute of limitations begins to run is hampered in the case of an "insidious disease" like the one suffered by Pedraza, since the cause of action against the defendant could be said to occur on a number of different dates.[6] To resolve the difficulty, the Massachusetts courts have adopted the "discovery rule," under which a cause of action for the negligent infliction of an insidious disease does not accrue (and the statute of limitations does not begin to run) until the plaintiff "knew or should reasonable have known that he had contracted [the disease] as a result of the conduct of the defendants." *Id.* 445 N.E.2d at 612.

In order to find that the "discovery rule" is applicable to the plaintiff, this Court must be satisfied that the plaintiff (1) had knowledge of his injury, and (2) that he had knowledge of its cause – specifically, that he had knowledge he was harmed as a result of the defendant's conduct. *Fidler v. Eastman Kodak Company*, 714 F.2d 192,

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[6] In *Olsen*, the Massachusetts Supreme Judicial Court ("SJC") suggested the following possibilities:

> the date of the defendant's negligent act; the date of the plaintiff's first exposure to the product; the date of the plaintiff's last exposure to the product; the date of the first physiological effect on the plaintiff, whether recognized by the plaintiff or not; the date of discovery of injury; and the date on which the plaintiff discovered, or reasonably should have discovered, that he has been harmed as a result of the defendant's conduct.

Olsen, 445 N.E.2d at 611. In the same opinion, the SJC rejected plaintiff's suggestion that a cause of action does not accrue until such time as the injured party discovers that the injury is permanent. *Id.* 445 N.E.2d at 612.

198 (1st Cir.1983). However, as the Massachusetts Appeals Court has noted, "notice of likely cause is ordinarily enough to start the statute running." *Lear-Heflich v. Schwartz*, 21 Mass.App.Ct. 928, 930, 485 N.E.2d 692 (1985), *review denied*, 396 Mass. 1106, 488 N.E.2d 1179 (1986) (Table) (*quoting Fidler, supra* at 199).

Since this suit was filed on November 4, 1985, the question before this Court is whether or not a reasonable jury could find that the plaintiff did not know or have reason to know prior to November 4, 1982 that Shell's conduct was the likely cause of his injury.

2. Relevant Facts

A reasonable jury could find the following facts:

In 1969, prior to this employment at U.T.C., Pedraza underwent chest surgery. Following the surgery itself, Pedraza also received radiation therapy. Magistrate's Report at 5.

The plaintiff began working for U.T.C. sometime in 1972. He suffered no symptoms of asthma until approximately June 1977, roughly one month after he was assigned to a new chemical mixing operation at work. *Id.* Shortly thereafter, however, the plaintiff began experiencing "symptoms of fatigue, shortness of breach, dizziness, loss of consciousness, tearing eyes, burning eyelids and the spitting up of blood." *Id.* at 6. It seems clear from the evidence on the record that Pedraza was aware of the onset of the symptoms, and noticed that they were exacerbated on those days when he was assigned to the chemical mixing operation. *Id.*

A number of serious asthma attacks culminated in the plaintiff's transfer to another work environment in November 1977. *Id.* at 7. A workman's compensation claim filed by Pedraza's employer states that the plaintiff felt that working with chemicals and gases was causing his asthma. *Id.*

Following a physical examination of the plaintiff in January 1978, Dr. Arthur C. DeGraff, Jr., reached the conclusion that Pedraza's condition was " 'consistent with hypersensitivity reaction to Epichlorohydrin.' " *Id.* at 8. DeGraff's statement was made in a letter to John M. Young at Liberty Mutual Insurance Co.; however, there is no indication in the record that DeGraff informed Pedraza of his suspicions at that time. Pedraza himself stated in an affidavit that "I [Pedraza] was not aware until May of 1983 when Dr. DeGraff sent a letter to my Attorney, Frank R. Saia, J.D., [sic] that sorted out the causes of my various complaints." Affidavit of Cruz Pedraza in Opposition to Defendants' Motion for Summary Judgment on the Issue of Statute of Limitations, attached as Exhibit 1 to Plaintiffs' Memorandum in Opposition to Defendants' Motion for Summary Judgment.

The plaintiff's medical condition was further complicated in 1980 by the development of "mediastinal lymphadenitis and pericarditis." Magistrate's Report at 9. Pedraza was released from his employment by U.T.C. on July 6, 1981. *Id.*

Following his discharge, Pedraza filed a complaint against U.T.C. with the Connecticut Commission on Human Rights and Opportunities ("Commission"). *Id.* In his complaint, Pedraza alleges that his asthma developed

as a result of working with fiberglass materials at U.T.C., and noted that he suffered an asthma attack after being assigned to a chemical mixing station in the plant. *Id.* The gist of his complaint against U.T.C. was that the company failed to accommodate him and his disability. *Id.* However, none of the materials submitted by the plaintiff mention ECH or any product specifically produced by Shell.

The Commission's Report, which Pedraza received by certified mail in May 1982, stated that "[t]here is no medical proof to substantiate [Pedraza's] allegation that his asthma was work connected or responsible for the continued poor attendance." Magistrate's Report at 10.

The plaintiff was hospitalized twice in 1982 due to his asthma, once in June and once in October. Magistrate's Report at 11. None of the material in the record indicates that the plaintiff was informed on either occasion of the role that ECH played in his impaired lung function.

As noted above, Dr. DeGraff wrote to Attorney Saia, plaintiff's counsel, in the spring of 1983, and outlined his understanding of the various causes of the plaintiff's condition. In a letter the following November, Dr. DeGraff again reviewed the plaintiff's condition, and stated that the plaintiff had suffered a thirty percent loss of lung function over and above the lung damage caused by his mediastinal fibrosis. Magistrate's Report at 11-12.

3. Application of the Discovery Rule to the Case at Bar

In its motion for summary judgment, Shell argues that the First Circuit's decision in *Cornell v. E.I. DuPont de Nemours & Co., Inc.*, 841 F.2d 23 (1st Cir.1988), imposes a duty on the plaintiff to "seek out the cause of his illness from the appropriate professionals." Shell Oil Company's Motion for Summary Judgment at 8. In Shell's view, Pedraza, who experienced the onset of his symptoms as early as 1977, totally failed to meet that burden.

However, *Cornell* is of no help to Shell, as that decision turned on particular facts not present in the current case. Cornell, a spray painter, used Imron, a Dupont paint containing Desmodur N-75, from 1980 to 1982. *Id.* at 23. Cornell was aware, based on his own experience and from reading the labels of the products he used, that the polyurethanes could cause damage to the lungs. *Id.* at 23-24. While noting that Cornell had smoked heavily for a number of years, the First Circuit also concluded that Cornell experienced specific symptoms which could only result from exposure to Imron, among them the spitting up of paint. The First Circuit found that it was undisputed that Cornell associated his physical condition with his use of the Imron paint by the end of 1980; however, he did not initiate his lawsuit until the spring of 1984. *Id.* Accordingly, the First Circuit affirmed the granting of summary judgment against Cornell. *Id.*

In the present case, there is no evidence Pedraza knew or should have known from his own experience that inhalation of epoxy resin (or ECH in particular) could cause lung damage. Although it is not clear on the

record, it is at least inferable that Pedraza was working with a larger number of chemicals than was Cornell, and thus could less reasonably have been expected to know which product was causing the harm. Finally, it is certainly true that Pedraza himself experience a wider range of systemic disorders which could conceivably have been the cause of his asthma. Under the circumstances, a jury could find that this plaintiff acted reasonably with respect to discovering the source of his injury.

Of greater similarity to the case at bar is *Errichiello v. Eli Lilly and Co.*, 618 F.Supp. 484 (D.Mass.1985). Errichiello was diagnosed as having vaginal cancer in 1973. *Id.* at 485. Her doctors and various family members made a connection between Errichiello's cancer and her mother's ingestion of diethylstilbestrol ("DES") during pregnancy, but Errichiello testified that she was not told of the possible link until July 1980. *Id.* at 485-86. She brought suit against Lilly and five other manufactures of DES on July 22, 1982. Lilly argues that under the "discovery rule," Errichiello had a duty to exercise reasonable diligence to discover the cause of her cancer in 1973, when she was first diagnosed. *Id.* at 486. However, the district court ruled that the "discovery rule" does not compel such diligence until such time as a plaintiff has notice not only of an injury but of its likely cause as well. *Id.* Given the favorable light in which the non-moving party's testimony should be regarded, the district court concluded that a question of material fact did exist as to whether or not Errichiello was informed of the possible connection between her cancer and DES prior to July 22, 1979. *Id.* at 486-87.

The facts in *Vigeant v. Zimmer, Inc.*, 612 F.Supp. 1043 (D.Mass.1985) also provide strong support for the plaintiff. Vigeant had her left knee replaced with a Zimmer prosthetic device in 1977. *Id.* at 1044. She was hospitalized again for severe knee pain in December 1978. At that time, her doctor told her that "the pin had loosened," and surgery was performed. The doctor's notes from that operation indicate that the prosthetic device had broken. *Id.* Although the doctor stated that he informed Vigeant of that fact, she claimed that she did not learn that the prosthesis was defective until she was hospitalized for subsequent operation in February 1980. *Id.* at 1044-45. Vigeant filed suit against Zimmer on November 15, 1982. The district court concluded that Zimmer had failed to show that there was no question of material fact as to when Vigeant should reasonably have been expected to have learned that their product was defective. *Id.* at 1445.

Finally, the case at bar may be favorably contrasted with *Shea v. Keuffel & Esser of New Jersey, Inc.*, 668 F.Supp. 41 (D.Mass.1986), *affirmed without opinion*, 823 F.2d 543 (1st Cir.1987). Shea, an architect, developed a severe skin disorder in 1974. *Id.* at 42. During the next seven years, Shea underwent numerous tests in an effort to determine what was causing his malady. *Id.* at 42-43. The first breakthrough did not occur until April 1981, when Shea reacted positively to a test involving a brand of sepia paper used at his workplace. *Id.* at 43. The treating physician, Dr. Ernesto Gonzalez, informed Shea at the time of the test's results. *Id.*

Dr. Gonzalez then contacted the defendant, the manufacturer of the paper, and requested a list of the chemicals used in making the paper. On October 23, 1981, Shea

reacted positively to diazonium, one [sic] the component parts of the sepia paper. *Id.* Dr. Gonzalez testified that he was certain of the connection between diazonium and Shea's condition, and further, that he discussed the results of the tests with Shea at the time. *Id.* The district court concluded that Shea was on notice as early as April 1981, and definitely by October 1981, that the sepia paper produced by the defendant was the likely cause of his skin condition.[7] Since Shea did not file suit until January 4, 1985, the court concluded that the suit was barred by the statute of limitations. *Id.* at 49.

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[7] As its first objection to the Magistrate's Report, Shell claims that throughout his report and recommendation, the Magistrate fails to distinguish between "epoxy resin," a product made by Shell, and "ECH," one of the resin's component parts. Shell argues that the statute of limitations should begin to run at the time Pedraza first linked his injury to his exposure to Shell's epoxy resin, and not at the time when Pedraza finally learned which component (i.e., ECH) was actually responsible for his injury. To a limited extent, the language of *Shea* supports that argument, although the district court was not called upon to make a ruling as to which date controlled the start of the statute of limitations period.

In the instant case, however, there is at least one compelling reason for holding that the later date is controlling. In light of the number of chemicals to which he was exposed, there is a serious question of fact as to whether or not Pedraza had reason to know that Shell's epoxy resin was the likely cause of his injury *until* such time as he learned which specific chemical agent was responsible. The numerous citations listed by the defendant merely reflect Pedraza's sense that Shell's epoxy resin was among the potential causes; they do not convince this Court that he knew or should have known that the resin was *the* likely source.

In light of the above authorities, and mindful of the inferences which this Court is obligated to make on behalf of the plaintiff, the Court concludes that the defendant has not succeeded in demonstrating that there is no issue of material fact with respect to the plaintiff's knowledge of the likely cause of his injury prior to November 1982. Accordingly, summary judgment is not appropriate.

D. Sophisticated User Defense

1. Additional Relevant Facts

In support of its argument that Pratt & Whitney was a "sophisticated user" of ECH and therefore responsible for the plaintiff's injuries, Shell relies heavily on the deposition testimony of Richard Owen, who during the relevant period of time was a board certified industrial hygienist for Pratt & Whitney. As did the Magistrate, this Court accepts as true the allegations of fact contained in Owen's testimony for the purpose of discussing Shell's claim.

Of particular relevance to Shell's sophisticated user defense is Owen's testimony that Pratt & Whitney " 'recognized [its] duty as an employer to provide a workplace free from recognized hazards under OSHA.' " Magistrate's Report at 13, citing Defendant's Reply to Plaintiff's Opposition to Motion for Summary Judgment at 13. Owen also stated that Pratt & Whitney had access to a variety of documents detailing the toxicity of the products it used, including: "ACGIH criterion documents, an extensive library on toxicology, and the Shell MSDS (Material Safety Data Sheets) Sheets for Epoxy Resin." Magistrate's Report at 13-14. There is evidence on the

record that Shell's MSDS sheets were available at the plant where Pedraza worked.

However, plaintiff's expert toxicologist, Thomas F. Schrager, testified at deposition that Shell had failed to give proper warnings regarding its product to Pratt & Whitney. Magistrate's Report at 14. Specifically, Schrager alleged that Shell failed to provide specific instructions that enclosed hood ventilation be used in work areas, and that the workers wear respirators while working with the epoxy resin.

2. The Sophisticated User Defense

In Shell's view, its duty to provide such warnings with respect to ECH were discharged because Pratt and Whitney should be considered a "sophisticated user" of ECH. Specifically, Shell argues that Pratt and Whitney (1) had knowledge of certain federal statutes and regulations pertaining to respiratory protection; (2) had adequate warning of ECH's hazards as evidenced by Pratt and Whitney's implementation of safety measures; (3) should be charged with the knowledge of relevant safety standards (which Shell asserts operate as a discharge of Shell's duty to warn); and (4) should be charged with knowledge of the hazards of ECH.

As the Magistrate correctly points out, the substantive law which governs the plaintiff's claims is the law of the state of Connecticut, where the alleged tort occurred. To date, the Connecticut state courts have not considered or adopted the sophisticated user defense in the toxic tort context. Indeed, it would be contradictory for them to do so in light of Connecticut's recognition of strict liability

and explicit adoption of section 402A of the Restatement (Second) of Torts. *See Hall v. Ashland Oil Co.*, 625 F.Supp. 1515, 1521 n. 1 (D.Conn.1986), *citing Garthwait v. Burgio*, 153 Conn. 284, 216 A.2d 189 (1965) and *Rossignol v. Danbury School of Aeronautics, Inc.*, 154 Conn. 549, 227 A.2d 418 (1967).

Shell suggests to this Court that an "interpretation of federal statutes and regulations are at the heart of the legal issues in this case," Shell's Memorandum at 17, and that therefore, this Court should not be concerned about the possibility of blazing new trails in Connecticut tort law. That is simply not correct. A common law tort is at the heart of the legal issues in this case, a tort to which the State of Connecticut has expressed its willingness to apply the doctrine of strict liability. Whether or not various federal statutes make Pratt and Whitney a "sophisticated user," thereby shielding Shell from tort liability, is very much a state law question.[8] As the Connecticut courts have not as yet addressed this question, it is incumbent upon this Court to refrain from imposing its own view upon them.

There being no indication that the Connecticut state courts would recognize the "sophisticated user" defense, this Court concludes that it is not available to Shell in this case, and accordingly declines to examine the issue further.

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[8] By contrast, whether or not various federal statutes and regulations preempt state common law claims *is* a question of federal law. However, as was discussed *supra*, that question is not properly before the Court.

IV. CONCLUSION

For the reasons set forth above, the defendant Shell's objections are hereby OVERRULED, and the Magistrate's Report and Recommendation is ADOPTED. Accordingly, defendant's motion for summary judgment is DENIED.

It is So Ordered.

APPENDIX 4

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MASSACHUSETTS

CRUZ PEDRAZA, ET AL	)	
	)	CIVIL ACTION
v.	)	NO. 85-0421-F
SHELL OIL COMPANY	)	
	)	

REPORT AND RECOMMENDATION REGARDING DEFENDANT SHELL OIL COMPANY'S MOTION FOR SUMMARY JUDGMENT[1]

March 15, 1989

PONSOR, U.S.M.

I. Introduction

In this diversity actio.. plaintiff Cruz Pedraza (hereafter "Pedraza" or "plaintiff") claims his lungs were permanently damaged as a result of inhaling the chemical epichlorohydrin ("ECH") while employed by United Technologies Corporation, Power Systems Division ("U.T.C."). He is proceeding against Shell Oil Company ("Shell"), the manufacturer of the chemical, under theories of negligence – including negligent design, manufacture, and distribution – strict liability, and breach of implied warranties. Plaintiff's spouse, Alejandrina Pedraza, claims loss of consortium against the defendant, and

[1] This matter has been referred to the court for report and recommendation pursuant to Rule 3 of the Rules for United States Magistrates in the United States District Court for the District of Massachusetts, 28 U.S.C. section 636(b) (1) (B).

plaintiff's children, Roberto and Mary Ellen Pedraza, claim loss of parental society.

Shell has filed a motion for summary judgment. For the reasons stated below, the court will recommend that Shell's motion be denied.[2]

II. Procedural and Factual Background

A. Procedural Background

On November 4, 1985, plaintiff brought suit against three defendants: his employer, U.T.C., and two chemical manufacturers, Shell and Dow Chemical Company ("Dow"). U.T.C. filed a motion to dismiss, arguing that under Connecticut law, the Connecticut Worker's Compensation Act provided the exclusive remedy against an employer for injuries allegedly arising out of plaintiff's employment. This motion was treated as a motion for summary judgment pursuant to Federal R. Civ. P. 12(b).

Shell and Dow filed motions for summary judgment on March 17, 1986 and October 10, 1986, Respectively. Dow raised a statute of limitations defense, arguing that plaintiff's cause of action was time barred as a matter of law under the applicable Massachusetts statutes. Shell's motion contended that plaintiff had failed to present sufficient evidence that it had made sales of ECH to U.T.C. during the relevant time period. On March 2, 1987,

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[2] This case contains class action allegations. Class certification has not yet been entertained by the court. The existence of class claims does not affect disposition of this motion.

Chief Judge Freedman adopted the Magistrate's recommendation that U.T.C. be dismissed from the case and that the two remaining motions for summary judgment be denied.

After discovery, Dow filed a second motion for summary judgment. Dow argued that there was not sufficient evidence upon which it could be found that the plaintiff was exposed to and damaged by chemicals manufactured by it. This motion was granted on October 5, 1987, leaving only Shell as a defendant.

Both of the remaining parties conducted additional discovery, prompting Shell to file this second motion for summary judgment on June 24, 1988. As grounds for the motion, Shell offers new evidence and recent case law construing the Massachusetts discovery rule to contend that the plaintiff's claims are time barred by the Massachusetts statutes of limitation. The defendant also argues in the alternative that under the applicable law, Shell has discharged its duty to warn.

The facts have been previously set forth in this court's Report and Recommendation of February 13, 1987 (hereafter "R & R"), a copy of which is appended. However, defendant now asserts that additional facts have come to light during discovery that should persuade this court to reconsider its rejection of the statute of limitations defense originally advanced by Dow. These additional facts have been incorporated into the factual summary below.

The First Circuit has stated:

> In ruling on a motion for summary judgment, the court must look at the record in the light

> most favorable to the party opposing the motion and must indulge all inferences favorable to that party. 523 F.2d 461, 464 (1st Cir. 1975), *cert. denied*, 425 U.S. 904 (1976).

Stepanischen v. Merchants Dispatch Trans. Corp., 722 F.2d 922 (1st Cir. 1983).

B. Factual Background

Plaintiff was born in Puerto Rico and came to the mainland in 1967. Letter of Dr. Godar of May 2, 1984 at 1. He appears to have a limited competency in English, his second language. On March 23, 1986, plaintiff's brother, Pedro Pedraza – a bilingual Spanish/English speaking person – assisted him in responding to Shell's written interrogatories. Plaintiff's Answers to Defendant's Interrogatories at 1. Similarly, an interpreter, Laura Eastment, was called upon to assist the plaintiff during his deposition by Shell's attorneys. *See* Shell's Notice of Deposition of Cruz Pedraza, May 27, 1987.

At least two of the doctors who examined the plaintiff in connection with this action experienced difficulty obtaining an accurate medical history because of a combination of language and speech problems. One physician reported a "language barrier that impedes careful accumulation of historical data." Dr. Godar's letter of 5/2/84 at 6 paragraph 1. Defendant's Exhibit F. Another doctor wrote to U.T.C.'s insurance carrier: "History was obtained from Pedraza with some difficulty because of a stuttering defect which I am sure was aggravated by the need to speak in English rather than his native Spanish."

Dr. DeGraff's letter to John Young of 1/25/78 at 1. Defendant's Exhibit I.

In 1969, before he was employed by U.T.C., Pedraza underwent surgery. The procedure is variously described as the removal of a "tumor on right side of chest," *Id.*, "thymus was resected," Letter of Dr. DeGraff of 1/25/78 at 1, Shell's Exhibit I,[3] and as a thoracotomy and resection of a well localized mediastinal right mass with a pathologic diagnosis of mediastinal thymoma. Letter of Dr. Godar of 5/2/84 at 3, Shell's Exhibit F. Following the surgery plaintiff received radiation therapy. R & R at 3.

Pedraza was employed by U.T.C., Power Systems Division[4] from 1972 through 1981. Until sometime in 1978 he worked in a plastics molding department. R & R at 2-3.

Plaintiff had no symptoms of asthma until around June, 1977, about a month after he was assigned to a new chemical mixing operation at work. Dr. DeGraff's letter of 1/25/78 at 1.[5] The mixing operation employed substances

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[3] As the court's original Report and Recommendation notes:

Dr. DeGraff's letter refers to plaintiff's surgery as having been performed in 1973, but several sources, including plaintiff's answers to [Dow's] Interrogatories, indicate 1969 is correct. Regardless, the surgery was clearly performed well before the conduct complained of beginning in 1977. R & R at 3.

[4] Plaintiff's employer is also referred to as Pratt & Whitney throughout the record. R & R at 2.

[5] Although the letter itself could be taken to imply that plaintiff mentioned the use of ECH to Dr. DeGraff, it is just as reasonable to infer that the doctor's knowledge of the use of ECH in the mixing operation came from the employer's health and safety report of 6/16/77. *See*, Exhibit B to Plaintiff's Brief in Opposition to Dow.

containing the chemical epichlorohydrin ("ECH"). Internal Pratt & Whitney Memo from R. J. Owen to D. B. Schibi of 6/16/77, Exhibit B to Plaintiff's Memorandum in Opposition to Dow's Motion for Summary Judgment. Plaintiff inhaled fumes produced during the mixing process which irritated his lungs. R & R at 3. He began experiencing symptoms of fatigue, shortness of breath, dizziness, loss of consciousness, tearing eyes, burning eyelids and the spitting up of blood. Dr. Godar's letter of 5/2/84 at 1. Pedraza complained to his foreman and to doctors, but each time he was sent back to work. *Id.* He continued to work despite the fact that his asthma symptoms were aggravated on days he was assigned to the chemical mixing operation. Dr. DeGraff's letter of 1/25/78 at 1.

On June 16, 1977 R. J. Owen of U.T.C.'s Health and Safety Engineering Department issued an internal memo concerning plaintiff's complaints of respiratory difficulties. The report included the information that ECH was involved in the chemical mixing operation, but stated that adequate ventilation existed and concluded that "Mr. Pedroza [sic] should not have breathing difficulties from his job at Pratt & Whitney." Memo of R. J. Owen, Plaintiff's Memorandum, Exhibit 2. As the original Report and Recommendation observed: "There is no indication in the record whether Pedraza was informed about the report or specifically the presence of ECH in the mixing process." R & R at 4.

Plaintiff's asthma symptoms continued and on June 29, 1977, they became serious enough to warrant emergency room treatment at Saint Francis Hospital. After this

incident, Pratt & Whitney returned plaintiff to his previous job. Dr. Godar's letter of 5/2/84 at 2. Subsequent asthma attacks caused the plaintiff to leave the job site on several occasions. *Id.* On October 27, 1977, plaintiff was again sent to the Saint Francis Emergency Room for treatment of an asthma attack. Not until November of 1977 was plaintiff "moved to a lathe operation and away from the previous environment after discussions by the plant medical department." *Id.*

Pratt & Whitney filed a report of this October incident with its workmen's compensation carrier, Liberty Mutual Insurance Company, on December 6, 1977. The claim form linked plaintiff's asthma attack with chemicals in the work environment, stating: "Employee works with chemicals (volatile) & gases. [H]e feels this is causing the asthma." Shell's Exhibit C. Later in December a check for $572.58 was issued to plaintiff by Liberty Mutual. This check constituted a form of worker's compensation benefits. R & R at 4.

Sometime during this period, John M. Young of Liberty Mutual apparently referred Mr. Pedraza to Dr. Arthur C. DeGraff, Jr., of Hartford Lung Physicians for a medical exam. Dr. DeGraff's letter of 1/25/78. On January 17, 1978, Dr. DeGraff examined the plaintiff and took his medical history. Dr. Godar's letter of 5/2/84 at 2. On the basis of this examination, the patient's medical history, the Pratt & Whitney "investigation of work conditions," and company medical records, Dr. DeGraff began to suspect that ECH was the cause of plaintiff's recent medical problems. He cited all of these sources of information as contributing to his "Impression" that Pedraza was suffering from asthma that was "most likely work

related and did not exist prior to his employment at Pratt & Whitney." Dr. DeGraff's letter of 1/25/78 at 1,2.

In this report, which was written eight days after the physical examination and addressed exclusively to Young at Liberty Mutual, the doctor enclosed a copy of a description of the respiratory effects associated with exposure to ECH resin. He also revealed that plaintiff's history was "consistent with hypersensitivity reaction to the Epichlorohydrin." *Id.* at 2.

The contents of Dr. DeGraff's report were not disclosed to the plaintiff during this time period. R & R at 5. Indeed, plaintiff reported that he did not learn of the doctor's opinion until November, 1983[6] when Dr. DeGraff wrote to plaintiff's attorney, apparently enclosing a copy of the January 25, 1978 letter. *Id.* and Plaintiff's Affidavit in Opposition to Shell's Motion for Summary Judgment on Statute of Limitations, November 12, 1986.

In 1978 plaintiff was transferred to another department at U.T.C. where he worked as a machine operator. R & R at 5. Sometime in 1980 plaintiff was diagnosed as having mediastinal lymphadenitis and pericarditis. *Id.* U.T.C. terminated plaintiff on July 6, 1981. Shell's Exhibit J at 2.

On August 7, 1981 plaintiff filed a complaint against U.T.C. with the Connecticut Commission on Human

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[6] As the court's original Report and Recommendation stated, plaintiff obviously intended this date, although his affidavit specifies May, 1983. There is no May, 1983 letter from DeGraff anywhere in the record, only the letter of November 15, 1983 to plaintiff's counsel. R & R at 5, n. 7.

Rights and Opportunities. Shell's Exhibit J. Plaintiff charged that his employer had discriminated against him because of his physical disability (asthma) and his national origin (Puerto Rican ancestry) when it fired him. *Id.* at 1, 2. In this sworn affadavit [sic], filed without the assistance of an attorney, Shell's Exhibit L at 1, Pedraza specifically alleged that he developed an asthmatic condition after working with fiberglass materials at U.T.C. for about five years. Shell's Exhibit J at 2. He stated further that he had suffered an asthma attack after being transferred to a position mixing chemicals and noted that this condition worsened over time, despite the fact that he was transferred to a different position mixing chemicals. *Id.* Plaintiff also noted other symptoms he experienced while working with chemicals. *Id.* The gravamen of his complaint was that U.T.C. had failed to accommodate his disability: "Rather than transfer to another position which would minismize [sic] condition they fired me. Denying me equal accommodation." *Id.* at 2.

On April 15, 1982 the Connecticut Commission On Human Rights and Opportunities issued a Finding of No Cause and Summary in which it accepted U.T.C.'s version of the facts surrounding its decision to terminate plaintiff. Shell's Exhibit K. In its answer to plaintiff's complaint, U.T.C. had stated that "their medical facility found that there is evidence that the asthmatic condition existed prior to Complainant's working with fiberglass and resins." During the investigation that ensued, the company attributed plaintiff's firing to poor attendance. *Id.* at 22.

The Commission's report stated that its investigator had access to "all memos and correspondence, complainant's attendance records, and complainant's personnel file." *Id.* On the basis of this evidence, the investigator concluded that "[t]here is no medical proof to substantiate his [plaintiff's] allegation that his asthma was work connected or responsible for the continued poor attendance." *Id.* at 24. As one of its specific findings of fact, the Commission noted that "Respondent's Medical Department evaluated Complainant and reported that Complainant's asthma was not work connected." *Id.* at 23.

Pedraza was notified of the results of this investigation and the reasons for the dismissal of his complaint by certified mail on 5/16/82.[7] *Id.* at 3, Shell's Exhibit L.

Plaintiff was hospitalized twice in 1982 with a diagnosis of asthma. Dr. Godar's letter of 5/2/84 at 3. On June 17, 1983 Dr. DeGraff wrote to James Parent, a labor representative for the International Association of Machinists and Aerospace Workers, regarding his consultation with Pedraza the day before. R & R at 5. Plaintiff had told the physician he was easily fatigued. *Id.* Dr. DeGraff stated, "[a]lthough Mr. Pedraza clearly has asthma, much of his symptoms undoubtedly relate to . . . impaired cardiac function. . . . " *Id.* Dr. DeGraff wrote to James Parent again on October 3, 1983, stating both that plaintiff's mediastinal fibrosis was undoubtedly a result of the radiation therapy he received following the removal of

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[7] Exhibit K mistakenly identifies the notification date as 3/16/82, but all of the other documents indicate May, not March. *See* Shell's Exhibit L at 2 and Shell's Memorandum at 5.

the thymic tumor in 1969, and that the mediastinal fibrosis had affected plaintiff's heart. *Id.* at 6.

In his November 15, 1983 letter to plaintiff's counsel, Dr. DeGraff clearly offered the opinion that Pedraza had asthma, the probable cause being industrial fume exposure. Exhibit C to Plaintiff's Opposition to Dow. Dr. DeGraff also stated that Pedraza suffered from mediastinal fibrosis and pericarditis as a result of the radiation therapy he received in 1969. Referring to the latter conditions, Dr. DeGraff went on to say:

> This is not related to his asthma, however much of Mr. Pedraza's symptoms of exercise limitation results from the pericarditis and mediastinal fibrosis. . . . With dust or fume exposure, his asthma symptoms increase, and [his] exercise [is] limited by his asthma. Mr. Pedraza's asthma is sufficient to cause an approximate 30% loss in function of both lungs, this loss in function is over and above the loss of lung function due to the mediastinal fibrosis. R & R at 6.

Dr. Godar examined Pedraza on January 27, 1984. Referring to the fact that plaintiff's asthma symptoms might continue even after removal from exposure to ECH, Dr. Godar stated:

> However, even at its onset the condition was partly affected by restrictive disorder resulting from treatment for the thymoma, including both thoracotomy and radiation treatment. It is also clear that since 1980 there has been a progressive cardiomegaly, suggesting a cardiac disorder that requires more evaluations since it may play a significant role in the patient's respiratory

> impairment. I do not believe his cardiac condition is the major factor since on his best days he is able to climb two flights of stairs and walk up to one mile. In other respects, his pattern of symptoms is consistent with that of a chronic asthmatic bronchitis. . . . *Id.* at 6-7.

On January 29, 1985 the Connecticut Workers' Compensation Commission approved disability benefits for plaintiff based upon his employment with U.T.C. R & R at 7. The injury noted on the workers' compensation form is "acute asthma attack" with a 30% loss in function of lungs. *Id.* Date of injury is listed as October 28, 1977 and plaintiff signed this claim form on January 28, 1985. *Id.*

Plaintiffs filed this action on November 4, 1985.

C. Additional Facts Relating to the Sophisticated User Defense

At the time Pedraza's alleged exposure occurred, Richard Owen, a Senior Industrial Hygienist, was a board certified hygienist for plaintiff's employer, Pratt & Whitney. Defendant's Memorandum in Support of Motion for Summary Judgment at 12. Defendant's citation is to the deposition testimony of Owen at pp. 9-10, which it identifies as Exhibit P to its Memorandum. Yet in the previous paragraph on the same page of its Memorandum, defendant correctly identifies its Exhibit P as the Deposition of Samuel W. Oakes. *Id.* In Shell's subsequent Reply to Plaintiff's Opposition to Motion for Summary Judgment, defendant acknowledges that it failed to attach this exhibit to its original motion and states that it is curing this omission by inserting the missing excerpts

as Substitute Exhibit P to its Reply. Shell's Reply at 6-7. Despite the fact that defendant cites to the Owen deposition at 8-10, 35, 39, and 48-50, this court has been able to locate only pages 1 and 8-10 in defendant's combined pleadings. *Id.* at Substitute Exhibit P. Since the testimony by Mr. Owen as summarized by defendant in its Memorandum consists of facts which, even if true, would not affect this court's disposition below of Shell's sophisticated user defense, the court will assume for the purposes of this argument that the defendant's statement of these facts is accurate.

Owen apparently stated in his deposition that Pratt & Whitney "recognized their duty as an employer to provide a workplace free from recognized hazards under OSHA." Defendant's Reply to Plaintiff's Opposition to Motion for Summary Judgment at 13. Owen further testified that Pratt & Whitney had available to it the following sets of documents regarding the toxicology of the products it used: ACGIH criterion documents, an extensive library on toxicology, and the Shell MSDS (Material Safety Data Sheets) Sheets for Epoxy Resin. *Id.* at 12-13. Owen also stated that "[h]e would expect that the local exhaust ventilation system met the requirements of the Shell MSDS sheet." *Id.*

According to the deposition of Schibi, the MSDS sheets were available at the Rocky Hill Plant where Pedraza worked. *Id.* at 13, citing Exhibit Q at 22. Defendant also asserts that engineering controls were implemented at plaintiff's workbench to meet OSHA regulations.

Plaintiff's expert toxicologist, Thomas F. Schrager, testified in his deposition that Shell "failed to provide

adequate warnings and instructions" to plaintiff's employer. Plaintiff's Memorandum in Opposition to Defendant's Motion for Summary Judgment at 11. Specifically, Schrager found defendant's warning to be inadequate in that Shell's MSDS Sheets failed to provide: "(1) specific instructions that enclosed hood ventilation be used in work areas," and lacked "(2) instructions that respirators should be used by workers." *Id.*, citing Exhibit 3 at 6-7.

III. Discussion

On June 24, 1988 Shell filed this motion for summary judgment. As grounds for the motion, Shell argues that additional evidence made available through discovery as well as recent case law construing the Massachusetts discovery rule compel this court to find that plaintiff knew or should have known before November 5, 1982 (*i.e.*, three years prior to filing the complaint) of the alleged causal relation between Shell's product and his condition. Defendant's Memorandum in Support of Summary Judgment at 3, 12. In the alternative, Shell contends that it is entitled to summary judgment as a matter of law because it has "the legal right to rely on a sophisticated user defense." *Id.* at 18.

As this court previously stated in its original Report and Recommendation, in opposing a properly supported motion for summary judgment the non-moving party, here the plaintiff,[8] has the obligation of bringing forward

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[8] Although summary judgment is sought here against all plaintiffs, both parties have confined their arguments to Cruz Pedraza. The other plaintiffs rise or fall with Cruz Pedraza.

"significant probative evidence" tending to show a genuine issue of material fact which, if decided in his favor, would permit a reasonable jury to return a verdict in his favor. *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 244 (1986); *Narcisco Rafael Perez de la Cruz v. Crowley Towing and Transportation Company*, 807 F.2d 1084, 1086 (1st Cir. 1986). Applying this standard, the court will address defendant's two grounds for summary judgment.

A. The Statute of Limitations

In support of its motion for summary judgment, Shell states that this is its first and only motion for summary judgment as to statute of limitations and that additional facts and new case law demonstrate that plaintiff has failed to carry his burden of proof of showing that he has met the applicable statutes of limitations. Defendant's Reply to Plaintiff's Opposition to Motion for Summary Judgment at 1, 6.

Regardless of the choice of substantive law in this case, the court must apply the procedural statutes of limitations of this forum. *Hemric v. Reed & Prince Mfg. Co.*, 739 F.2d 1,2 (1st Cir. 1984). There is no dispute that the applicable limitations period is the three years provided for both negligence and warranty claims under Mass. Gen. L. ch. 260, section 2A and ch. 106, section 2-318, respectively.

The issue presented is when did the plaintiff's causes of action accrue. In order for this lawsuit to have been timely when filed on November 4, 1985, plaintiff's cause of action must not have accrued earlier than November 4, 1982. Although plaintiff claims his injury occurred in

1977,[9] that does not necessarily establish the date of accrual. Guided by the principle that "a plaintiff should be put on notice before his or her claim is barred by the passage of time," in the area of tort law, Massachusetts has applied a discovery rule to causes of action based on inherently unknowable wrongs. *Olsen v. Bell Laboratories, Inc.*, 388 Mass. 171, 175 (1985).

Olsen teaches that, in a claim of negligence resulting in an insidious occupational disease, the cause of action does not accrue before the plaintiff "knew or should reasonably have known that he had contracted [the disease] as a result of the conduct of the defendants." *Id.*

As the First Circuit has observed, this requirement has two components: first, that the plaintiff have knowledge of his injury and, second, that he have knowledge of its cause – that is, that he has been harmed as a result of the defendant's conduct. *Fidler v. Eastman Kodak Company*, 714 F.2d 192, 198 (1st Cir. 1983). The court agrees with defendant that "the plaintiff bears the burden of proving facts taking this case outside the impact of the three-year statute of limitations." *Franklin v. Albert*, 381 Mass. 611, 612 (1980), and "notice of likely cause is ordinarily enough to start the statute running." *Lear-Heflich v. Schwartz*, 21 Mass. App. Ct. 928, 930 (1985) (rescript opinion) (quoting *Fidler, supra* at 199).

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[9] On the worker's compensation claim form plaintiff states October 27, 1977, as the date of injury. Exhibit C to Defendant's Memorandum. Everything else in the record points to around June, 1977. R & R at 13.

In applying the discovery rule to this case, Shell puts forth two arguments, one based upon additional facts and one based upon recent case law, in an effort to establish that plaintiff either actually knew or should have known that ECH was the likely cause of his asthma. The Court will address defendant's new evidence first.

1. Evidence of Alleged Actual Knowledge

Although this court recognizes that the application of the Massachusetts discovery rule to this record presents a very close question, it finds that there is evidence from which a jury could reasonably conclude that plaintiff did not actually know that defendant's conduct was the likely cause of his injury prior to November 4, 1982.

As noted in the original Report and Recommendation, Dr. DeGraff's letter of January 25, 1978 linking plaintiff's symptoms with exposure to ECH would be fatal to plaintiff's case except that – according to plaintiff's affidavit, which must be taken as true – Dr. DeGraff did not share his opinion with Mr. Pedraza until 1983. Plaintiff's Memorandum in Opposition to Defendant's Motion for Summary Judgment, Exhibit 1 at paragraph 3. Significantly, that letter was addressed exclusively to Young of Liberty Mutual, U.T.C.'s insurance carrier. Moreover, Dr. DeGraff's "Impression" that plaintiff was suffering from asthma which was most likely work-related and caused by a hypersensitivity to ECH was based not only on the physical examination he conducted on January 17, 1978 but also upon his evaluation of plaintiff's medical history, the Pratt & Whitney internal investigation reports, and company medical records. Dr.

DeGraff's letter of 1/25/78 at 1, 2. There is no evidence in the record before us that plaintiff himself connected ECH exposure with the onset of his asthma symptoms during that examination. As noted in the previous Report and Recommendation, it is just as reasonable to infer that Dr. DeGraff learned of the presence of ECH in plaintiff's workplace from the June 16, 1977 U.T.C. internal memo rather than from plaintiff. R & R at 15.

Defendant relies heavily on the medical records of U.T.C., Defendant's Exhibit B, the worker's compensation injury reports and plaintiff's compensation payments, Defendant's Exhibits C, D and E, and especially plaintiff's Connecticut Commission of Human Rights (hereafter "CCHR") Complaint, Defendant's Exhibit J, to argue that plaintiff actually knew that his condition was probably caused by ECH exposure, even if Dr. DeGraff did not share his diagnosis with plaintiff. Defendant's Memorandum at 2-6.

As noted in the above recitation of facts, however, plaintiff suffered from previous and simultaneous maladies which were in fact unrelated to the asthma but which he might at the time have reasonably believed to be the cause of his symptoms. Plaintiff had undergone surgery and radiation treatment for a thymic tumor prior to this employment at U.T.C. Eventually Drs. Godar and DeGraff did link Pedraza's cumulative symptoms not only with his work-related asthma but also with his impaired cardiac function, which they in turn attributed to the mediastinal fibrosis caused by the radiation therapy plaintiff had received in 1969. Dr. Godar's letter of May 2, 1984 at 4,6.

The facts of this case bear a striking resemblance to *Henderson Hines and Mary F. Hines v. New Jersey Silica Sand Co., et al*, Civil Action No. 82-3723-F, March 15, 1985 (a copy of this court's Report and Recommendation of that date is appended).[10] *Hines* alleged in December of 1982 that he contracted silicosis as a result of his employment as a sandblaster from 1956 to 1979. *Hines* R & R at 2. All of the defendants asserted that plaintiffs' claim was barred by the three-year statute of limitations. Defendants stressed that plaintiff had consulted his family doctor on multiple occasions with regard to his symptoms, that the doctor suspected silicosis might be a possible cause, and that he told plaintiff to "stay out of the dust." *Id.* at 3-9. In recommending that the defendants' motions for summary judgment be denied, this court stressed the following facts: 1) plaintiff, who was illiterate, suffered from previous and simultaneous maladies which were unrelated to the silicosis and might to some extent explain his symptoms, 2) the family doctor plaintiff consulted never advised him to stop working, and 3) plaintiff's doctor told him very little, even though the doctor did gradually become convinced that plaintiff's symptoms were probably linked with the workplace. *Id.* at 10-11. The court concluded that sufficient evidence

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[10] All of the defendants in *Hines* filed objections to the Report and Recommendation. However, the case settled on June 11, 1985. Consequently, Chief Judge Freedman did not have occasion to rule on whether or not to adopt this court's recommendation that the defendants' motions for summary judgment be denied.

existed on the record before it that plaintiff was never told that he had a silicosis-type disease or that there was ever anything more than a possibility of a linkage between this disease and plaintiff's workplace until December of 1979, when plaintiff entered the hospital for a biopsy at his doctor's request. *Id.* at 11, 6.

Shell's key piece of *new* evidence with respect to its allegation that Mr. Pedraza actually knew of such a linkage in his own case is the complaint filed with the CCHR on August 7, 1981. Defendant alternately characterizes this complaint, which was signed by plaintiff and made under oath, as one alleging racial discrimination against U.T.C., Defendant's Memorandum at 4, and as one alleging workplace-induced asthma. *Id.* at 5. However the cover sheet appended to plaintiff's complaint affidavit characterizes his employer's conduct as discrimination based on plaintiff's "Physical Disability (Asthma)," Defendant's Exhibit J at 1.

The affidavit itself, which was filed without the assistance of an attorney, does *not* mention ECH nor does it expressly assert a *causal* relationship between plaintiff's asthma and his exposure to chemicals at a particular workplace site. *Id.* at 2. The complaint does specifically allege that plaintiff developed symptoms while working *in various positions* at U.T.C. It also alleges that these symptoms worsened over time and that U.T.C. discriminated against plaintiff by firing him rather than accommodating his physical disability. *Id.* On the basis of this newly discovered evidence, a jury could reasonably conclude that plaintiff believed his prior condition had been exacerbated by his environment at work, not that the environment at work *caused* that condition.

Defendant's additional evidence also includes the CCHR's May 13, 1982 Finding of No Cause, Defendant's Exhibit K, and proof that Mrs. Pedraza received and signed for a copy of the CCHR's decision on May 15, 1982. Defendant's Exhibit L. The CCHR conducted an investigation of plaintiff's charges which involved not only contacting plaintiff "by phone, in person and by mail," Defendant's Memorandum at 5, but also reviewing "all [U.T.C.] memos and correspondence, complainant's attendance records, and complainant's personnel file," Defendant's Exhibit K at 1. The CCHR investigator stated unequivocally that U.T.C.'s "Medical Department evaluated [plaintiff] and reported that [his] asthma was not work connected." *Id.* at 2. On the basis of its investigation, the CCHR dismissed the complaint, concluding: "There is *no medical proof* to substantiate his [plaintiff's] allegation that his asthma was *work connected* or *responsible* for the continued poor attendance." *Id.* at 3. (Emphasis added.) Once again, Shell has only uncovered new facts from which a jury could reasonably conclude that as late as May 15, 1982, plaintiff did not know and should not have been put on notice that exposure to ECH in the U.T.C. workplace was the likely *cause* of his asthma.

2. Recent Case Law Applying the Massachusetts Discovery Rule

In addition to the new facts offered in support of its motion for summary judgment, Shell also argues that a recent First Circuit Court of Appeals opinion applying the Massachusetts discovery rule to a negligence action

involving an insidious occupational disease "must govern this Court's analysis of the statute of limitations issue." Defendant's Memorandum at 7-8. In a nutshell, defendant construes *Cornell v. E.I. Du Pont De Nemours & Co.*, 841 F.2d 23 (1st Cir. 1988), as holding that a plaintiff presenting symptoms of the type experienced by Pedraza has "a duty to seek advice from the medical field and that the statute of limitations began running when that duty to seek advice began." *Id.*

Applying this construction of *Cornell* to plaintiff's claims, Shell focuses on the medical records of U.T.C.'s doctors, primarily the entries made by a Dr. Reardon on December 21, 1977, Defendant's Exhibit B, and Dr. DeGraff's letter of 1/25/78, to argue that "Pedraza was under a duty to obtain his doctor's opinion under the *Cornell* case which triggered the implied knowledge alternative of *Olsen* and *Cornell*." *Id.* at 6-7.

Although the record before this court presents a close question on the issue of implied knowledge, Shell misconstrues the nature of the duty discussed by the Court of Appeals in *Cornell* and consequently misapplies that duty to the facts of this case. Contrary to the thrust of defendant's memorandum, *Cornell* does not impose upon plaintiffs suffering from occupational diseases any *new* duty to seek medical advice under Massachusetts law. Instead, *Cornell* elucidates the level of notice required under *Olsen* and *Fidler* to trigger "the duty to discover . . . whether the theory of causation is supportable and whether it supports a legal claim." *Cornell*, 841 F.2d 23, 24 (1st Cir. 1988).

In its previous Report & Recommendation, this court relied upon both *Olsen* and *Fidler* when it rejected Dow's contention that plaintiff's claims were time barred as a matter of law. R & R at 13, 15-17. *Cornell*, which reaffirms *Fidler* as "an accurate statement of Massachusetts law," stresses that plaintiffs "need not know that their injuries are legally compensable . . . but rather they must be *put on notice such that* they have a 'duty to discover from the legal, scientific, and medical communities' " whether or not their belief that their injuries were *caused by* defendant's conduct is "legally supportable." *Cornell*, 841 F.2d 23, 24 (1st Cir. 1988). (Emphasis added.) (Citation omitted.)

Both *Cornell*, at 24, and *Pitts v. Aerolite SPC Corp.*, 673 F. Supp. 1123, 1127 (D. Mass. 1987), the two recent cases applying the Massachusetts discovery rule urged upon this court's attention by defendant, characterize the level of notice required to start the statute running as notice of "likely cause." *Pitts* elaborates this notice requirement by explaining that "once on notice *of facts sufficient* that they reasonably should have known that their injuries were likely caused by the defendant's conduct, the plaintiffs have three years to ascertain whether their claims are legally supportable." *Id.* at 1127. (Emphasis added.)

The facts upon which the trial court based its decision regarding Cornell's cause of action in *Pitts* were not in dispute. *Pitts*, 673 F. Supp. at 1126, 1128-1129. In affirming Judge Young's Joint Memorandum and Order in *Pitts*, which granted defendant's motion for summary judgment against the plaintiff in *Cornell* on the basis of the discovery rule, the Court of Appeals stressed the following facts. Cornell, who was employed as a spray

painter, knew "from experience *and* from reading the labels of the products he used, that polyurethanes [in the paint] could cause harm *to the lungs*." *Cornell*, 841 F.2d at 23-24. (Emphasis added.) The Court of Appeals also noted that Cornell experienced "symptoms of exposure as remarkable as expectorating paint" at a time when he had this knowledge. *Id.* at 24. Judge Torruella therefore endorsed the lower court's reasoning that Cornell "had sufficient facts" to be on notice that defendant's paint was the likely cause of his respiratory problems and that this level of notice was sufficient to trigger the "duty to investigate his condition by seeking advice from the medical field." *Id.*

The record before the court here can be readily distinguished from that before the court in *Cornell*. Cornell had "visited a physician" some six months after he began to associate his respiratory problems with the defendant's product. *Pitts*, 673 F. Supp. at 1126. It was during this visit that Cornell "disclosed to his physician" his suspicions concerning the relationship between his symptoms and the spraying of polyurethane paint. *Id.* Shell asserts that Pedraza, like Cornell, had a duty to inquire of "his expert" regarding the cause of his symptoms. Defendant's Memorandum in Support of Motion for Summary Judgment at 9. But Pedraza, unlike Cornell, was examined not by his personal physician but by a series of doctors who either worked for and reported to his employer or who reported exclusively to his employer's insurance carrier. Nowhere in the record before this court is there any indication that plaintiff consulted with either an "expert" of his choice or a physician with whom he had an ongoing relationship. In light of the fact that

Pedraza "had no opportunity to read the labels [on the chemical containers] and become apprised of any health effects associated with epichlorohydrin," Plaintiff's Memorandum at 7, it is reasonable that Pedraza would be substantially less likely than the plaintiff in *Cornell* to question aggressively the company doctors who initially examined him or pursue an opinion regarding causation from the doctor who reported to his employer's insurance carrier.

This case can also be distinguished from *Cornell* on other grounds with respect to notice of facts sufficient to trigger the duty to inquire. Pedraza worked with several chemicals and fiberglass at U.T.C. while Cornell "only worked with one substance, paint," and "had read the labels on that paint and thereby knew the manufacturer's name." Plaintiff's Memorandum at 7. Moreover, Pedraza had prior and overlapping symptoms which caused him to question "whether the work environment was affecting [his] prior existing conditions or whether [he] was experiencing a new condition related to work or to other non work related causes." *Id.*, Exhibit 1, Plaintiff's Affidavit at paragraph 2. Because he had "so many ailments," plaintiff relied on his employer and its doctors to determine the cause of his lung problems. *Id.* at paragraph 4.

Finally, Pedraza's relative lack of sophistication as well as his evident difficulties with English, his second language, contrast markedly with the plaintiff in *Cornell* and recall the illiterate plaintiff in *Hines, supra*. In the latter case this court denied summary judgment against a plaintiff whose personal physician had withheld both his diagnosis of silicosis and his suspicions of a causal linkage between that disease and plaintiff's workplace. *Hines*

R & R at 11. The court did not imply that Hines need have been given a definite diagnosis of his illness or a description of the full extent and gravity of his disability before the statute of limitations would begin to run. However, the court did find that the plaintiff *was* entitled to some diagnosis that would put him on notice of the probable existence of a work-related disease and the linkage of this disease to the conduct of the defendant. *Id.* at 11.

Shell thus misapplies *Cornell* to the record before this court when it concludes that under the Massachusetts discovery rule Pedraza "had a duty to obtain the opinion of Dr. Reardon or Dr. DeGraff." Defendant's Memorandum at 8-9. Unlike the plaintiff in *Cornell*, Pedraza has brought forward significant probative evidence tending to show a genuine issue of material fact which, if decided in his favor, would permit a reasonable jury to find that he did not have "sufficient facts" to constitute notice that defendant's product was the likely cause of his injury. As this court stated in its original Report and Recommendation, plaintiff is entitled to be put on notice of the probable existence of the asthma – as distinct from some other simultaneous malady – and the linkage of this disease to the conduct of the defendant. R & R at 15.

Indulging all inferences favorable to the non-moving party, *Stepanischen*, 722 F.2d 922 (1st Cir. 1983), this court concludes that there are sufficient facts in the record to warrant a jury to conclude that Pedraza was not under a duty to discover whether his claim was legally supportable until Dr. DeGraff's letter to plaintiff's attorney of May, 1983 linking his asthma with his exposure to ECH in the workplace. Plaintiff's Affidavit at paragraph 4.

B. Shell's Sophisticated User Defense

Shell's alternative ground for summary judgment rests on its contention that it has discharged its duty to warn under the applicable law because plaintiff's employer, Pratt & Whitney, is a sophisticated user of ECH. Defendant's Memorandum at 1 and Defendant's Supplemental Memorandum After Oral Argument at 1. Shell's sophisticated user defense rests upon three key assertions: (1) that knowledge of all of the potential hazards posed by ECH was "equally available to Shell or Pratt & Whitney, Mr. Pedraza's employer," Defendant's Supplemental Memorandum at 1, (2) that "Pratt & Whitney had a legal obligation to inform themselves of the hazards posed by the products they used and to provide adequate protection to their employees" under prevailing OSHA regulations and standards, Defendant's Reply to Plaintiff's Opposition to Motion for Summary Judgment at 7, and (3) that in light of (1) and (2) Shell "believes that it may rely on others doing what they ordinarily do or have a duty to do. . . . This is particularly true where the duty is imposed by statute." Defendant's Supplemental Memorandum at 1.

As authority for these three propositions Shell cites, respectively: (1) the applicable OSHA regulations as well as the deposition testimony of defendant's and plaintiff's experts, Owen and Schrager, Defendant's Reply to Plaintiff's Memorandum in Opposition at 7 and Exhibit A to Defendant's Supplemental Memorandum, (2) the OSHA Act of 1970, Defendant's Memorandum in Support of Summary Judgment at 13-16, and (3) Comment N to

section 388 of the Restatement of Torts (Second), Defendant's Supplemental Memorandum at 1, as well as case law from various jurisdictions, Defendant's Memorandum in Support of Summary Judgment at 16-18. In essence, Shell's defense amounts to the contention that its duty to adequately warn of hazards associated with ECH was met as a matter of law because it is legally entitled to rely on Pratt & Whitney's actual knowledge of those hazards *or* knowledge imputable to Pratt & Whitney on the basis of its alleged status as a sophisticated user. *Id.* at 13.

There is no dispute that Connecticut law governs plaintiff's claims. R & R at 8 and Plaintiff's Response to Defendant's Reply Brief After Oral Argument at 2. Shell does not cite any Connecticut cases or federal district court cases applying Connecticut state law in which the sophisticated user defense has been invoked. As plaintiff observes, Connecticut state courts have not considered the viability of the sophisticated user defense in the toxic tort context. Plaintiff's Response at 3. However, the United States District Court sitting in Connecticut – in a closely analogous case – has refused to grant a defendant manufacturer's motion for summary judgment based on this defense in a toxic tort case involving benzene because of its reluctance to "blaze new legal trails" for the forum state. Plaintiff's Response at 3, citing *Hall v. Ashland Oil Co.*, 625 F. Supp. 1515, 1521 (D. Conn. 1986).

Of the eight cases upon which Shell relies in which other jurisdictions have been willing to accept this defense in products liability actions, only one treats the sophisticated user defense as sufficient grounds for granting summary judgment for a defendant. *Goodbar v.*

Whitehead Brothers, 591 F. Supp. 552 (W. Va. 1984), *aff'd sub nom. Beale v. Hardy*, 769 F.2d 213 (4th Cir. 1985). None of the other cases involved a motion for summary judgment and most, if not all, are distinguishable on their facts. *See Jacobsen v. Colorado Fuel and Iron Corporation*, 409 F.2d 1263, 1272-1273 (9th Cir. 1969) (upholding judgment in favor of defendant manufacturer of steel strand and rejecting plaintiff's contention that defendant had the duty to warn an employee-user where "[the] overwhelming weight of the evidence preponderates in favor of the trial court's findings" that "decedent's employer and its supervising personnel should have known *and* actually *did know* the dangers inherent in the use of defendant's product in the hold-down device") (emphasis added); *Martinez v. Dixie Carriers*, 529 F.2d 457, 463-465 (5th Cir. 1976) (upholding judgment that defendant manufacturer of petrochemical mixture was not liable for death of worker overcome by noxious fumes on theories of negligent failure to warn or strict liability where evidence was inconclusive regarding the adequacy of defendant's warning *and* employees to be warned "were experienced professionals" who were already aware of the danger and were "familiar with the precautions necessary for safe handling of manufacturer's product") (emphasis added); *Bradco Oil and Gas Co. v. Youngstown Sheet and Tube Co.*, 532 F.2d 501, 504 (5th Cir. 1976), *reh'g denied*, 540 F.2d 1084 (5th Cir. 1976), *cert. denied*, 429 U.S. 1095 (1977) (upholding findings and judgment for the defendant manufacturer of high-strength tubing that fractured in an oil and gas well operated by the plaintiff purchaser on grounds that "under the unique facts of this case" the loss resulted from plaintiff's "improper selection of materials coupled

with failure to conduct" certain tests rather than from defendant's alleged failure to provide the sophisticated purchaser with additional information); *Reed v. Penwalt Corporation*, 591 P.2d 478, 481 (Wash. 1979) (upholding jury verdict for defendant manufacturer where plaintiff, a potato trimmer in a food processing plant, contracted dermatitis when she came into contact with defendant's caustic soda but defendant gave ample warning to plaintiff's employer and there was no suggestion that these warnings were insufficient); *Rost v. C.F.&I. Steel Corporation*, 616 P.2d 383, 386 (Mont. 1980) (upholding jury verdict for defendant manufacturer of elevator cable where store owner's failure to inspect elevator was superceding cause of plaintiff's injury); *Marshall v. H.K. Ferguson Company*, 623 F.2d 882, 886-887 (4th Cir. 1980) (upholding directed verdict for defendant manufacturer of spent hops conveyor and verdict in favor of brewery's designer where plaintiff's injury "resulted solely from the conduct" of his fellow employees, who were "unquestionably" as well informed with regard to the operation of the system "and the hazards incident thereto" as was the manufacturer and designer); and *Strong v. E.I.DuPont De Nemours and Company*, 667 F.2d 682, 686-688 (8th Cir. 1981) (upholding directed verdict for manufacturer of connecting device and jury verdict for manufacturer of pipe where court found that defendants had no duty to warn of the particular hazard which in fact occurred because the facts established that plaintiff's decedent and his employer actually knew of the hazard and therefore the lack of warning was not the proximate cause of the injury).

In none of these cases did a defendant manufacturer attempt to argue – as Shell apparently does here – that the very existence of OSHA standards and regulations governing its product establishes as a matter of law that an industrial customer had actual knowledge of the particular hazard which in fact materialized in its workplace or that it had no duty as a manufacturer to warn industrial customers because those standards and regulations rendered its customers sophisticated users with respect to that product as a matter of law. Even in *Goodbar, supra,* the one case cited by Shell in which defendants who sold in bulk to an industrial purchaser were granted summary judgment based on a sophisticated user defense, the suppliers were able to establish on the basis of a "plethora" of evidence that plaintiffs' employer, a foundry, was in fact "a knowledgable [sic], sophisticated user" of silica-containing products. *Goodbar,* 591 F. Supp. at 561.

The trial judge in *Goodbar* specifically found from his review of "the various appendices, affidavits, depositions, and exhibits" that the Lynchburg Foundry which employed plaintiffs had "extensive knowledge" not only of the "hazards of inhaling silica dust" and the disease of silicosis but also of "proper dust control methods." *Id.* Moreover, the judge added in a note that earlier cases involving silicosis made it clear that the dangers of working in silica dust had become "a matter of common knowledge" by 1944. *Id.* at n. 9.

The uncontested fact that silicosis is an occupational disease of which sophisticated users of silica-containing products had been aware "since at least the 1930s" renders the reasoning of *Goodbar* and *Beale* of marginal relevance in the context of the lesser-known hazards of ECH

and the particular circumstances surrounding Pedraza's exposure. Noting that "all of the parties stipulated to the underlying facts which the district court summarized" in *Goodbar*, the Fourth Circuit Court of Appeals agreed that the defendant manufacturers of silica and related products had no duty to warn foundry employees directly of the risks and dangers of contracting silicosis because plaintiffs' employer "was cognizant of the problems of silica dust and silicosis since at least the 1930s and that, from the late 1950s and early 1960s onward, the foundry's knowledge was nothing less than extensive." *Beale*, 769 F.2d at 214.

This case can also be distinguished from *Goodbar* in terms of the factual record developed at the summary judgment stage with respect to the Virginia Foundry's status as a sophisticated user. The defendants in *Goodbar* had submitted evidence that an officer of the Foundry which employed the plaintiffs had taken an active role in the American Foundrymen's Society since the mid-1930s and that this organization had played a key role in the development and dissemination of information regarding not only the sources of silica exposure but also "engineering controls and procedures," silicosis control programs involving the distribution of information to employees about the disease, periodic x-rays of employees, periodic and regular monitoring of silica dust concentrations, and the distribution of respirators to employees. *Id.* at 562.

Moreover, as Senior Judge Blumenfeld pointed out in *Hall v. Ashland, supra*:

> The authority of *Goodbar*, even in its own jurisdiction, is unclear. Only two months earlier, the Fourth Circuit Court of Appeals had held en

> banc in *Oman* that a district court did not err in refusing to instruct a jury that an asbestos manufacturer's duty to warn the ultimate users, employees of its purchaser, was satisfied if the employer/purchaser was aware of the dangers involved in the use of the product . . . *Oman* and *Goodbar* rely upon the same Virginia cases and section 388 of the Restatement (Second) of Torts, yet they reach opposite conclusions . . .

Hall, 625 F.Supp. at 1521 n. 1. (Citation omitted.)

Significantly, Shell does not cite *Oman* or other cases which reject the sophisticated user defense. See, for example, *Shell Oil v. Gutierrez*, 581 P.2d 271, 279 (Ariz. 1978), in which the court affirmed a judgment for employees of a liquid xylene buyer against a manufacturer of xylene on the grounds that the defendant failed to provide adequate warning of danger of explosion to packager or retailer and had failed to provide information regarding appropriate precautions. In this case the court specifically held that adequacy of warning is a jury question.

A recent survey of industrial products liability cases involving this defense reveals "a startling variety of outcomes." Note, *Failures to Warn and the Sophisticated User Defense*, 74 Virginia L. R. 579, 579 (1988). As this Note observes:

> Different jurisdictions impose widely varying degrees of liability on the manufacturer, employer, and even the employee, significantly affecting the incentives for the manufacturer and the employer to warn of the product's potentially dangerous properties.

Id. Because the sophisticated user defense embodies a policy choice, *Id.* at 586, Judge Blumenfeld's cautionary statement in *Hall* bears repeating:

> The role of a federal court sitting in a diversity action is to apply the law of the forum state, not to blaze new legal trails for that state. This court cannot simply fashion a doctrine to cover the situation at hand by reference to opinions of other federal courts around the country, but must give careful consideration to the product liability law of the State of Connecticut and attempt to determine the law that the state courts would apply in this situation.

Hall, 625 F.Supp. at 1521, n. 2.[11]

In *Hall*, the plaintiff successfully argued that whether decedent's employer was an expert with respect to benzene and the health risks attendant to its industrial use and whether defendant Ashland's MSDS sheets constituted adequate warnings throughout the period of decedent's alleged exposure were questions of fact for the jury. *Id.* at 1520-1521. As Judge Blumenfeld observed in this context, knowledge of a risk is not necessarily the same thing as knowledge of the extent of the risk. *Id.* at 1520. He went on to note that:

> This distinction militates strongly against the defendant's argument that an industrial employer should be held to the knowledge of an

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[11] Judge Blumenfeld also noted that *Goodbar* is of limited relevance to Connecticut tort law because Connecticut, unlike Virginia, has explicitly recognized strict product liability and has adopted section 402A of the Restatement (Second) of Torts. *Id.*

> expert concerning *all* of the components of its manufacturing processes and that that imputed knowledge should be enough to cut off the duty of the manufacturer of the components to warn of risks associated with their use, particularly when it is the ultimate users who must bear those risks.

Id.

In this case, Pedraza puts forth a different theory. As plaintiff emphasizes:

> [T]he failure to warn theory is not that Shell did not warn Cruz Pedraza personally, but that Shell failed to provide Pratt & Whitney with sufficient instructions and warnings which would have enabled Pratt & Whitney to protect Cruz Pedraza from pulmonary exposure to Shell's epichlorohydrin products.

Plaintiff's Memorandum in Opposition to Defendant's Motion for Summary Judgment at 11. According to this theory:

> Shell's duty to provide adequate warnings and instructions is imposed by Connecticut law, providing 'product seller may not be considered to have provided adequate warnings or instructions unless they were devised to communicate with the person best able to take precautions against the potential harm.'

Id. at 11-12, citing Conn. Gen. Stat. Ann. section 52-572q (d). Pratt & Whitney was best able to take those precautions with respect to ECH products, but according to

plaintiff's expert, Dr. Schrager, Shell "failed to specifically instruct Pratt & Whitney that enclosed hood ventilation must be in place or that respirators must be used." *Id.* at 12.

Similarly, the plaintiff in *Hall* submitted "some evidence" that the defendant "did not provide a timely or adequate warning" to her decedent's employer.[12] On the basis of this evidence, the Court found that summary judgment was inappropriate, specifically holding that "adequacy of a warning is a question of fact for the jury." *Hall*, 625 F. Supp. at 1520, citing *Billiar v. Minnesota Mining and Manufacturing Co.*, 623 F.2d 240, 246 (2d Cir. 1980) (applying New York law).[13]

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[12] The court is aware that the facts in *Hall* are somewhat different from the record before this court. For example, the plaintiff in *Hall* does not appear to have questioned the adequacy of defendant's safety instructions *per se*. *Hall*, 625 F. Supp. at 1522. However, such differences do not undercut the relevance of the primary holding in *Hall* to the present case.

[13] Massachusetts courts also treat adequacy of a warning as a jury question. *See Sanderson v. Upjohn Company et al.*, 578 F. Supp. 338, 339 (D. Mass. 1984) ("adequacy of warnings accompanying a product usually is a question of fact for the jury"). More recently, this court had occasion to rely on *Sanderson* in rejecting a defendant's motion for summary judgment based on the "learned intermediary" rule, an exception to the duty to warn analogous to the sophisticated user defense. *Lear-Heflich v. G.D. Searle & Co.*, Civil Action no. 80-0309-F, Report and Recommendation of May 11, 1984 at 7, 10. Chief Judge Freedman subsequently adopted this Report in his Memorandum and Order of September 12, 1984, specifically endorsing this Magistrate's analysis of *Sanderson* and concluding that the

(Continued on following page)

Shell also appears to be arguing that even if a trier of fact could find its warnings to Pratt & Whitney inadequate, it would nevertheless have legally fulfilled its duty to warn plaintiff's employer because Pratt & Whitney was a sophisticated user which had equal access to information regarding the potential hazards of ECH. Defendant's Supplemental Memorandum at 1. Defendant bases this argument on Pratt & Whitney's access to Shell's MSDS sheets, the NIOSH criteria document describing ECH exposure, Exhibit A to Shell's Supplemental Memo, and Pratt & Whitney's status as an industry regulated by OSHA. Shell's Reply to Plaintiff's Opposition at 7. Yet in *Hall*, Judge Blumenfeld found the defendant's more ample deposition and documentary evidence concerning Pfizer's access to benzene guidelines set forth by the American Conference of Governmental Industrial Hygienists (ACGIH), NIOSH criteria documents regarding benzene, and Ashland's MSDS sheets concerning benzene to be "not conclusive" with respect to Ashland's efforts to establish that Pfizer should be considered a sophisticated user of benzene. *Hall*, 625 F. Supp. at 1521-1522. In other words, in *Hall* the Court held that because the plaintiff was able to present "some evidence" that Ashland did

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(Continued from previous page)

Report's ultimate conclusion was "unassailable." Memorandum and Order at 3-8. Moreover, Chief Judge Freedman went on to cite a products liability case in which a federal court sitting in Connecticut granted summary judgment for a defendant drug manufacturer but only "where it found that the defendant had fulfilled its duty to warn *and* the prescribing physician had been aware of all the risks inherent in the product." *Id.* at 8, citing *Goodson v. Searle Laboratories, Inc.*, 471 F. Supp. 546 (D. Conn. 1978).

not provide a timely or adequate warning to Pfizer, "the level of sophistication" of the employer itself became a genuine contested issue of material fact. *Id.* at 1522.

The record in the case before us compels this court to reach the same conclusion. Given the testimony of Pedraza's expert on the inadequacy of Shell's MSDS sheets, which must be taken as true for the purposes of this motion, it is evident that, as in *Hall*:

> [T]his is not a case where the pleadings and evidence clearly show that plaintiff cannot establish any set of facts upon which it can recover. Rather, even on the legal theory that the defendant puts forward, the plaintiff has demonstrated that there are material issues of fact that remain in genuine dispute.

Id. The very fact that Pratt & Whitney continually returned Pedraza to the same work even when he experienced aggravated symptoms, despite its knowledge that ECH was involved in the chemical mixing operation, when coupled with the employer's belief that "adequate ventillation [sic]" existed, R & R at 5-6, and its insistance [sic] that plaintiff's asthma was not work connected, R & R at 10, could lead a reasonable jury to accept plaintiff's contention that Shell's warnings and instructions to Pratt & Whitney were inadequate with respect to the particular hazard which did in fact materialize. From the same evidence a trier of fact could also infer that Pratt & Whitney was not a sophisticated user of ECH. "Even an employer who is aware of direct effects of the chemical may be unaware of more subtle or diffuse risks." *Hall*, 625 F. Supp. at 1519-1520.

Applying these principles to this motion, the court finds that Shell has failed to meet this burden and thus has failed to demonstrate that as a matter of law it fulfilled its duty to provide adequate warnings and instructions to Pratt & Whitney with respect to the use of ECH.

IV. Conclusion

For the reasons stated above this court therefore hereby recommends that Shell's motion for summary judgment be *DENIED*.[14]

/s/ Michael A. Ponsor
MICHAEL A. PONSOR
U. S. Magistrate

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[14] The parties are hereby advised that under the provisions of Rule 3(b) of the Rules for United States Magistrates in the United States District Court for the District of Massachusetts, any party who objects to these findings and recommendations must file a written objection thereto with the Clerk of this court *within ten (10) days* of the party's receipt of this Report and Recommendation. The written objection must specifically identify the portion of the proposed findings or recommendations to which objection is made and the basis for such objection. The parties are further advised that failure to comply with this rule shall preclude further appellate review by the Court of Appeals of the District Court order entered pursuant to this Report and Recommendation. *See, U.S. v. Valencia-Copete*, 792 F.2d 4, 6 (1st Cir. 1986); *U.S. v. Vega*, 678 F.2d 376, 378-79 (1st Cir. 1982). *See also, Thomas v. Arn*, 474 U.S. 140, 154-55 (1985).

APPENDIX 5

UNITED STATES COURT OF APPEALS

FOR THE FIRST CIRCUIT

CRUZ PEDRAZA, ET AL Plaintiffs, Appellees vs. SHELL OIL COMPANY, Defendant, Appellant	))))))	NO. 90-1291

CRUZ PEDRAZA, ET AL Plaintiffs, Appellants vs. SHELL OIL COMPANY, Defendant, Appellee	))))))	NO. 90-1402

ON APPEAL FROM A JUDGMENT OF THE
UNITED STATES DISTRICT COURT
DISTRICT OF MASSACHUSETTS

PETITION FOR REHEARING

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PETITION FOR REHEARING

Shell Oil Company respectfully moves for rehearing on the grounds that this Court's holding misapplies the law to the facts of this case. *Wood v. General Motors Corp.*, 865 F.2d 395 (1st Cir. 1988), *cert. denied*, 108 L.Ed. 2d 782 (1990).

Cruz Pedraza alleges he was injured by exposure to epichlorohydrin supplied by Shell Oil Company while working at Pratt & Whitney and that Shell is liable for his injuries because it failed to warn Pratt & Whitney to use a particular type of ventilating hood or, in the alternative, a personal respirator to reduce exposure to the lowest level possible. This Court recognized that OSHA had issued a specific standard of five parts per million for exposure to epichlorohydrin. 29 C.F.R. § 1910.1000, Table Z-1. This Court also recognized that OSHA regulations specified the precise controls, specifically engineering controls, necessary to comply with the inhalation standard. 29 C.F.R. §§ 1910.132, 1910.133, and 1910.134. The plaintiffs' expert, Dr. Schrager, conceded:

1. Applicable OSHA regulations specified that the epichlorohydrin inhalation standard was five parts per million. (A. S 63-64).
2. He had no information or evidence that the exposure values for epichlorohydrin were exceeded. (A. S 68-69).
3. Applicable OSHA regulations specified that engineering controls were to be used by the employer to meet that standard instead of personal protective gear. (A. S 65-68).
4. That local exhaust ventilation was an engineering control. (A. S 67).

5. Applicable OSHA regulation provided that an accepted engineering control was local exhaust ventilation. (A. S 70).

Dr. Schrager's opinion was that epichlorohydrin caused Mr. Pedraza's condition.

Mr. Owen, a certified industrial hygienist employed by Pratt & Whitney, testified that:

1. Pratt & Whitney had the Shell MSDS sheet for Epoxy Resin which contained the epichlorohydrin. (A. S 48).

2. Pratt & Whitney was aware of its duty under OSHA as an employer to provide a workplace free from recognized hazards. (A. S 44).

3. Pratt & Whitney had installed an engineering control system that met the OSHA requirements. (A. S 42-43).

The undisputed facts are that Pratt & Whitney was advised of the hazard of epichlorohydrin by Shell, recognized that a potential hazard existed, and took the OSHA required actions at Mr. Pedraza's work area.

Discovery narrowed the failure to warn claims by showing that plaintiffs have no evidence that Pedraza's exposure to epicholorhydrin exceeded the OSHA standard. Accordingly, plaintiffs' remaining claim is apparently that exposure to epichlorohydrin at levels below the OSHA limit caused Mr. Pedraza's condition and that the epichlorohydrin limit should be lower than the OSHA limit.

This Court found that implied preemption exists where there is a direct conflict between state and federal

law. Such a conflict exists in this case because under the facts disclosed by discovery, plaintiffs can only prevail if a lower standard for exposure to epichlorohydrin than the federally prescribed five parts per million is substituted by a jury for the OSHA standard. A finding for plaintiffs in this case would directly conflict with the OSHA standard for epichlorohydrin exposure recognized by this Court.

The Court's opinion emphasized the savings clause; however, the holding in this case will directly conflict with *Wood* which held that savings clauses cannot be read to permit common law causes of action that contradict or subvert a statutory scheme. *Wood v. General Motors Corp., supra,* 865 F.2d at 415-416. Plaintiffs' only claim in this case substitutes Dr. Schrager's opinion on the appropriate standard for epichlorohydrin exposure for that of OSHA. That would create a legal duty requiring Shell to warn of exposure levels less than the federal standard. Where a federal standard exists, a state cannot substitute its judgment for that of the agency. *Missouri Pacific Railroad v. Railroad Comm. of Texas,* 850 F.2d 264 (5th Cir. 1988) *cert. denied,* 488 U.S. 1009 (1989). This opinion allows the plaintiffs' expert to establish an inhalation standard different than that established by OSHA. Accordingly, as to implied preemption this opinion is in direct conflict with *Wood v. General Motors Corp., supra,* 865 F.2d at 407-413; see also *San Diego Building Trades Council v. Garmon,* 359 U.S. 236 (1959) (correctly relied on by this Court in *Wood v. General Motors Corp., supra.*)

CONCLUSION AND PRAYER

The law is misapplied to the facts of this case. This Court's opinion conflicts with this Court's holding in *Wood v. General Motors Corp., supra.* Shell respectfully requests this Court reconsider its opinion affirm the district court's judgment or alternatively clarify its opinion to hold that the trial court and/or the jury must apply no other occupational exposure standard for epichlorohydrin than the OSHA five parts per million inhalation standard in this case and that the case be remanded in light of that holding.

Respectfully submitted,

SHELL OIL COMPANY,
BY ITS ATTORNEY,

DATED: August 26, 1991

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CERTIFICATE OF SERVICE

I hereby certify that this document has been served upon all counsel of record in compliance with F.R.C.P., on August 26, 1991.

/s/ Robert L. Leonard
Robert L. Leonard, Esq.

UNITED STATES COURT OF APPEALS
FOR THE FIRST CIRCUIT

No. 90-1291

CRUZ PEDRAZA, ET AL.,
Plaintiffs, Appellees,

v.

SHELL OIL COMPANY,
Defendant, Appellant.

No. 90-1402

CRUZ PEDRAZA, ET AL.,
Plaintiffs, Appellants,

v.

SHELL OIL COMPANY,
Defendant, Appellee.

ORDER OF COURT

Entered: September 6, 1991

Upon consideration of defendant's petition for rehearing,

It is ordered that the petition for rehearing be denied.

By the Court

FRANCIS P. SCIGLIANO, CLERK
FRANCIS P. SCIGIANO

APPENDIX 6

Shell Oil Company's parents, subsidiaries, and affiliates

Pursuant to Supreme Court Rule 28.1, Shell Oil Company is a wholly-owned subsidiary of SPNV Holdings, Inc., a Delaware corporation. SPNV Holdings, Inc. is a wholly-owned subsidiary of Shell Petroleum N.V., a Netherlands Company. The voting shares of Shell petroleum N.V. are owned 60% by Royal Dutch Petroleum Company, The Hague, The Netherlands, and 40% by The "Shell" Transport and Trading Company, p.l.c., London, England. Royal Dutch Petroleum Company and the "Shell" Transport and Trading Company, p.l.c. are holding companies which together directly or indirectly own securities of companies in the Royal Dutch/Shell Group, the members of which are severally engaged throughout the greater part of the world in one or more phases of the oil, chemical, coal, nuclear energy and metals industries. The following list names the companies in which Shell or its subsidiary has an ownership interest.

SHELL OIL COMPANY

(Subsidiary and Affiliate* Companies)

AP Shipping Corporation
Asiatic Petroleum Corporation
Fractionation Research, Inc.
GRAVCAP, Inc.*
Heat Transfer Research, Inc.*
Houston Fuel Oil Terminal, Inc.
Inland Corporation*
Loop, Inc.*
Lucky Chance Mining Company, Inc.

Mesbic Financial Corporation of Houston*
Nickerson American Plant Breeders, Inc.
  Agripro Biosciences Inc.
Oil Companies Institute for Marine Pollution Comp
Oil Insurance Limited*
Pecten Arabian Company
  PICO Limited
  Pecten Middle East Services Company
    Pecten Chemicals Inc.
    Saudi Petrochemical Company
Pecten Export Corporation
Pecten Trading Company
  Oil Companies Institute for Marine Pollution Comp
Royal Lubricants Company Inc.
Scallop Liquefied Natural Gas, Inc.
Shell Agricultural Chemical Company
Shell Capital Inc.
Shell Catalysts Ventures Inc.
  CRI International, Inc.
    CRI Far East Trading Company Limited
    CRI Investment Corporation
      CRI Europe S.A.
        Catalyst Recovery Europe S.A.
        Catalyst Technology Europe S.A.
      Catalyst Technology Europe S.A.*
        Catalyst Technology GmbH
    CRI Real Estate, Inc.
      CRI-SAM, Ltd.
    CRI Ventures, Inc.
      CT Bolting Products & Services, Inc.
      Catalyst Recovery Canada, Ltd.
      Catalyst Technology, Inc.
        Catalyst Technology (Canada) Ltd.
    Catalyst Recovery of Louisiana, Inc.
    Catalyst Technology S.A.R.L.*
    Catalyst Technology U.K. Limited
      Catalyst Technology S.A.R.L.

Nippon CRI, Ltd.
CRI Metal Products, Inc.
CRI Ventures, Inc.*
CT Bolting Products & Services, Inc.
Catalyst Recovery Canada, Ltd.
Catalyst Technology, Inc.
Catalyst Technology (Canada) Ltd.
White Water Blasters, Inc.
Criterion Catalyst Company*
Shell Communications, Inc.
Shell Energy Resources Inc.
Shell Energy Company
Pecten International Company
Pecten Al Jazera Company
Pecten Algeria Company
Pecten Argentina Company
Pecten Portugal Company S.A.R.L.
Pecten Ash Sham Company
Pecten Belize Company
Pecten Brazil Alagoas Company
Pecten Brazil Alagoas Petroleum Company
Pecten Brazil Amazon Company
Pecten Brazil Amazon Exploration & Development Co.
Pecten Brazil Amazon Exploration Company
Pecten Brazil Petroleum Company
Pecten Brazil Bahia Company
Pecten Brazil Bahia Exploration & Development Co.
Pecten Brazil Bahia Exploration Company
Pecten Brazil Bahia Petroleum Company
Pecten Brazil Exploration Company
Pecten Brazil Marajo Company
Pecten Brazil Maranhao Company
Pecten Brazil Maranhao Exploration Company
Pecten Brazil Petroleum Company
Pecten Brazil Rio Grande Do Norte Company
Pecten Cameroon Company

Pecten Canada Limited
Pecten Chile Company
Pecten Ecuador Company
Pecten Egypt Offshore East Company
Pecten Egypt Offshore West Company
Pecten Geophysical Company
Pecten Guinea-Bissau Company
Pecten Guinea-Bissau Exploration Company
Pecten Malaysia Company
Pecten Malaysia Petroleum Company
Pecten Niugini Company Limited
Pecten Orient Company
Pecten Overseas Petroleum Company
  Pecten Portugal Company S.A.R.L.
Pecten Paraguay Company
Pecten Portugal Company S.A.R.L.
Pecten Potiguar Company
Pecten Santos Company
Pecten Santos Exploration Company
Pecten Santos Petroleum Company
Pecten Sarawak Company
Pecten Somalia Company
Pecten Suriname Company
Pecten Syria Company
Pecten Syria Gas Company
Pecten Syria Petroleum Company
  Al Furat Petroleum Company*
Pecten Tanzania Company
  Pecten Portugal Company S.A.R.L.
Pecten Trinidad Company
Pecten Tunisia Company
  Pecten Portugal Company S.A.R.L.
Pecten Victoria Company
Pecten Vietnam Company
Pecten Yemen Company
Taranaki Offshore Petroleum Company
  Taranaki Offshore Petroleum Company Limited

Shell Gas Pipeline Company
Shell Gas Trading Company
Shell LNG Company
Columbia LNG Corporation*
Shell LNG Trading Company
Shell Mining Company
Bellaire Trucking Company
Billiton Metals Inc.
Clipper Coal Corporation
Encoal Corporation
Evergreen Mining Company
Marrowbone Development Company
Pecten Coal International Inc.
R. & F. Coal Company
Shell Coal and Terminal Company
East Kentucky Energy Corporation
Kermit Coal Company
Shell Mining Services Inc.
Shipyard River Coal Terminal Company
Triton Coal Company
Turris Coal Company
Shell Offshore Inc.
SOI Royalties Inc.
Shell Western E&P Inc.
Belridge Farms
Belridge Packing Co.
Choctaw Pipe Line Company
East Texas Salt Water Disposal Company*
Grande Ecaille Land Company, Inc.*
Mabee Petroleum Corp.
SWEPI Royalties Inc.
Shell Cortez Pipeline Company
Cortez Capital Corporation
Shell Michigan Pipeline Company
Shell Western Pipelines Inc.
Van Salt Water Disposal Company*
Wyoming Industrial Development Corporation*

Shell Finance Company
Shell Investment, Inc.
Shell LSO Property Company
Shell Leasing Company
Shell Motorist Club, Inc.
Shell Pipe Line Corporation
  Butte Pipe Line Company
  Dixie Pipeline Company*
  Explorer Pipeline Company*
  Locap, Inc.*
  Olympic Pipe Line Company*
  Plantation Pipe Line Company*
  West Shore Pipe Line Company*
  Wolverine Pipe Line Company*
Shell Polymers Ventures Inc.
  Ardyne Inc.
  Compositek Corporation
  Morrison Molded Fiber Glass Company
  Premix/E.M.S. Inc.
Triton Diagnostics Inc.
  United Scientific Incorporation

APPENDIX 7

UNITED STATES COURT OF APPEALS

FOR THE FIRST CIRCUIT

CRUZ PEDRAZA, ET AL.	)	NO. 90-1402
Plaintiffs, Appellants	)	
vs.	)	
SHELL OIL COMPANY,	)	
Defendant, Appellees	)	

ON APPEAL FROM A JUDGMENT OF THE
UNITED STATES DISTRICT COURT
DISTRICT OF MASSACHUSETTS

BRIEF OF THE APPELLEE

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* * *

sheets. (A. J 55). He also testified there was a forced-air ventilation system in the department where Pedraza worked (A. J 62) and that the minimum requirements for it were contained in the OSHA guidelines (A. J 58-59).

III. SUMMARY OF ARGUMENT

On the basis of the above record, the District Court granted Defendant's motion to dismiss Plaintiffs' claims on the grounds that such claims were preempted by the Act. This action is currently before this Court on Plaintiffs' appeal of that Judgment, as well as Defendant's cross-appeal of the District Court's denial of Defendant's motion for summary judgment based upon the defenses of the statutes of limitation and the sophisticated user defense.

In the Argument portion of this Brief, Section A argues that the Plaintiffs' state law claims are preempted. Section B argues that the Plaintiffs' claims are barred by the applicable statutes of limitation. Section C argues that the Defendant discharged its duty to warn under the sophisticated user defense.

IV. ARGUMENT

A. THE PLAINTIFFS' STATE LAW CLAIM8 ARE PREEMPTED BY THE OCCUPATIONAL SAFETY AND HEALTH ACT.

The Occupational Safety & Health Act (the "Act"), 29 U.S.C. § 651 *et seq.* (1989) includes an express preemption provision which states as follows:

> (a) **Assertion of State standards in absence of applicable Federal Standards.** Nothing in this Act shall prevent any State agency or court from asserting jurisdiction under State law over any occupational safety or health issue with respect to which no standard is in effect under section 6 (29 U.S.C. § 655).

29 U.S.C. § 667. The Act defines an occupational safety and health standard as ". . . a standard which requires conditions, or the adoption or use of one or more practices, means, methods, operations or processes, reasonably necessary or appropriate to provide safe or healthful employment and places of employment." 29 U.S.C. § 652(8). Under these provisions, state law is preempted in an area covered by an occupational safety and health standard. *Associated Industries of Massachusetts v. Snow*, 898 F.2d 274 (1st Cir. 1990); *Puffer's Hardware, Inc. v. Donovan*, 742 F.2d 12 (1st Cir. 1984); *Environmental Encapsulating Corp. v. New York*, 855 F.2d 48 (2nd Cir. 1988); *New Jersey State Chamber of Commerce v. Hughey*, 774 F.2d 587 (3rd Cir. 1985). The Occupational Safety and Health Administration (OSHA) also interprets the Act as preempting state law: "Section 18(a) [29 U.S.C. § 667(a)] of the Act is read as preventing any State agency or court from asserting jurisdiction under State law over any occupational safety or health issue with respect to which a Federal standard has been issued under Section 6 [29 U.S.C. § 655] of the Act." 29 C.F.R. § 1901.2.

The Plaintiffs' state law claims clearly involve issues covered by Federal occupational safety and health standards and those standards would be contradicted if the

Plaintiffs' claims were upheld. Therefore, their claims are preempted by § 667.

Pedraza contends he was injured at his place of work by the chemical epichlorohydrin. His expert, Dr. Schrager, testified that Shell, as the manufacturer and supplier of epichlorohydrin to Pedraza's employer, was negligent in failing to supply an adequate warning, which failure resulted in injury to Pedraza due to his exposure to the chemical at his work place (A. J 24). However, at the time of Pedraza's alleged work place exposure to epichlorohydrin, there were Federal occupational safety and health standards which specifically set limits on employee exposure to epichlorohydrin and the methods to limit such exposure to the chemical. 29 C.F.R. § 1910.1000 stated:

> An employee's exposure to any material listed in table Z-1, Z-2 or Z-3 of this section shall be limited in accordance with the requirements of the following paragraphs of this section.
>
> (a) Table Z-1:
>
> (1) *Materials with names preceded by "C" - Ceiling Values.* An employee's exposure to any material in table Z-1, the name of which is preceded by a "C" (e.g., C Boron trifluoride), shall at no time exceed the ceiling value given for that material in the table.
>
> (2) *Other materials - 8-hour time weighted averages.* An employee's exposure to any material in table Z-1, the name of which is not preceded by "C", in any 8-hour work shift of a 40-hour work week, shall not exceed the 8-hour time weighted average given for that material in the table.

* * *

(e) To achieve compliance with paragraph (a) through (d) of this section, administrative or engineering controls must first be determined and implemented whenever feasible. When such controls are not feasible to achieve full compliance, protective equipment or any other protective measures shall be used to keep the exposure of employees to air contaminants within the limits prescribed in this section. Any equipment and/or technical measures used for this purpose must be approved for each particular use by a competent industrial hygienist or other technically qualified person. Whenever respirators are used, their use shall comply with § 1019.134.

TABLE Z-1

Substance	p.p.m.	mg./M
* * *		
Epichlorhydrin – Skin	5	19

29 C.F.R. § 1910.132 included general requirements for protective equipment for employees exposed to the chemical. 29 C.F.R. § 1910.133 provided requirements for eye and face protection for employees exposed to the chemical and 29 C.F.R. § 1910.134 set forth permissible practices to protect employees from breathing the chemical. Both that section and 29 C.F.R. § 1910.1000 specifically state

engineering control measures are to be used instead of personal respirators unless engineering controls are not feasible.

Since federal regulations published in accordance with the Act covered the use of epichlorohydrin in the work place, the only location where Pedraza contends he was exposed to it, it is clear that state law is expressly preempted by the Federal standards which specifically limit the exposure and dictate the methods for protecting workers from epichlorohydrin.

In *Wood v. General Motors Co.*, 865 F.2d 395, 408 (1st Cir. 1988), *cert. denied* 108 L.Ed 2d 782 (1990), and *Palmer v. Liggett Group, Inc.*, 825 F.2d 620 (1st Cir. 1987), this Court held that claims based on state law were preempted because they had a regulatory effect. Therefore, the fact that this matter involves a lawsuit rather than a state legislative or regulatory act is of no consequence since each has a regulatory effect. *See also Pilot Life Ins. Co. v. Dedeaux*, 481 U.S. 41 (1987); *International Paper Co. v. Ouellette*, 479 U.S. 481 (1987); *San Diego Bldg. Trades Council v. Garmon*, 359 U.S. 236 (1959).

Plaintiffs do not take issue with the application of 29 C.F.R. § 1910.1000 to their claim. Instead, they contend that Pedraza's state law claim is not expressly preempted by the Act because 29 U.S.C. § 653(b)(4) states the Act shall not be construed to supersede any workmen's compensation law. The Plaintiffs argue that the general words in that section following the specific reference to workmen's compensation law rights mean that Pedraza's state law right to sue Shell for his alleged exposure to epichlorohydrin is not preempted.

The Plaintiffs' argument gives § 653(b)(4) a much broader meaning than was obviously intended. In the context of that section, the use of the phrase "common law or statutory rights" is limited to rights similar to workmen's compensation rights. Under the doctrine of *ejusdem generis*, "[w]here general words follow specific words in a statutory enumeration, the general words are construed to embrace only objects similar in nature to those objects enumerated by the preceding specific words." 2A *Sands, Sutherland Statutory Construction*, § 47.17 (4th ed. 1973). In § 653(b)(4), the phrase "common law or statutory rights" must be taken to mean rights of the same kind as those provided by workmen's compensation laws, regardless of how those rights are described. To read the phrase as Plaintiffs suggest would vitiate § 667(a) since employers and employees would maintain common law or statutory rights regardless of whether the issue was covered by a Federal occupational health and safety standard.

Further, the Plaintiffs do not contend that Pedraza's right to workmen's compensation benefits would be affected by preemption of his state law claim. Rather they argue that his or his employer's right to sue a third party such as Shell would be affected. However, that limitation does not supersede rights of either the employer or employee arising from the workmen's compensation law. The right of an employee or his employer to sue a third party does not arise from the Connecticut workmen's compensation statute. Conn. Gen. Stat. § 31-293, cited by the Plaintiffs, only states that the rights of an employer or employee to make a claim against a third party shall not be affected by the payment of compensation under the

workmen's compensation law. The Plaintiffs' Brief does not even suggest that the applicable workmen's compensation law creates the right of an employer or employee to sue a third party and they do not cite any other case where that section was given such an expansive meaning.

A state law may also be impliedly preempted by a Federal standard. *Hillsborough Cty. v. Automated Medical Labratories* [sic], 471 U.S. 707 (1985); *Rice v. Santa Fe Elevator Corp.*, 331 U.S. 218 (1947). In determining if a state law is preempted by implication, "one must look to interference with Congress' chosen method as well as to the ultimate goal of the Statute." *Wood v. General Motors Corp., supra*, 865 F.2d at 408. *See also International Paper Co. v. Ouellette*, 479 U.S. 481 (1987).

The facts underlying this claim show that the Plaintiffs' state court claim would interfere with the method and ultimate goal of the Act. The standards required accepted engineering control measures to limit exposure of workers to epichlorohydrin. 29 U.S.C. §§ 1910.134, 1910.1000. Dr. Schrager, the Plaintiffs' expert, agreed that Pedraza's employer had an accepted engineering control measure in place at the relevant times. (A. J 44). The standards also put a limit on the amount of exposure a worker can have to epichlorohydrin. 29 C.F.R. § 1910.1000. The Plaintiffs' expert also agreed there was no evidence that Pedraza was exposed to more than the limit set in that standard. (A. J 42-43). The only way Pedraza could establish he had a claim for Shell's alleged breach of its duty to warn was if he could establish he was exposed to an unacceptable level of epichlorohydrin. However, since the Federal standard specifically set an acceptable limit for exposure and since the Plaintiffs'

expert agrees there was no evidence of exposure of Pedraza above that limit, the only way to establish liability is to introduce evidence that some exposure less than the amount in the Federal standard would create liability. However, that would directly contradict the specific terms of 29 C.F.R. § 1910.1000, which allow exposure of workers to a certain limit and would interfere with the purpose of the Act, which is to establish acceptable exposure limits. To allow the Plaintiffs to pursue this claim would deny meaning to the specific terms in the Federal standard.

The interference which would result from allowing the Plaintiffs' claim to proceed is apparent from the testimony of the Plaintiffs' expert on the method to control exposure. Dr. Schrager testified it was his opinion Shell's warning should have specified the use of a personal respirator as an alternative to a non-personal ventilation system (A. 0 19-20). That also directly contradicts the specific language of 29 C.F.R. §§ 1910.134 and 1910.1000 which only allow use of personal respirators when engineering controls are not feasible.

The permissible exposure limits established by 29 C.F.R. 1910.1000 cannot be lowered by state law. A federal agency acting within the scope of its congressionally mandated authority has established a specific limit for exposure to epichlorohydrin in the work place and the specificity of its terms establish it is not subject to alteration by state law. *Ray v. Atlantic Richfield Co.*, 435 U.S. 151 (1978). There is no indication it was intended to be a minimum standard that could be varied from state to state. *Wood, supra* at 414.

B. THE PLAINTIFFS FAILED TO PROVE THEY FILED THEIR CLAIMS WITHIN THE TIME PROVIDED BY THE APPLICABLE STATUTES OF LIMITATION.

The applicable Massachusetts statutes of limitation for the Plaintiffs' claims are three years. Mass. Gen. L. ch. 260, § 2A (negligence) and Mass. Gen. L. ch. 106, § 2-318 (warranty). For purposes of those statutes, a cause of action does not accrue until a plaintiff knows or reasonably should have known that he was injured as a result of the defendant's conduct. *Olsen v. Beli Tel. Laboratories*, 388 Mass. 171, 445 N.E.2d 609 (1983). This Court has held that claims for breach of warranty are governed by the same legal analysis. *Fidler v. Eastman Kodak Co.*, 714 F.2d 192, 197 (1st Cir. 1983). Since the Plaintiffs filed a complaint on November 4, 1985, this action is barred by the applicable statutes if their causes of action accrued before November 4, 1982.

It is undisputed that Pedraza knew he had a serious health condition with asthma symptoms which began during June, 1977. The question then becomes when did Pedraza know or when should he have known his condition was allegedly related to his alleged exposure to epichlorohydrin. Dr. DeGraff, Pedraza's doctor, wrote to Liberty Mutual Insurance Co. on January 25, 1978, and

* * *

APPENDIX 8

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MASSACHUSETTS

CRUZ PEDRAZA, ET AL,	:	
Plaintiffs,	:	Case No.
vs.	:	85-0421 F
SHELL OIL CO., ET AL,	:	
Defendants.	:	

DEPOSITION OF DAVID B. SCHIBI

January 21, 1988

* * *

[p.11] responsibilities were concerned?

A. Safety engineering probably is a broad category to you. It also is a broad category as far as what you cover. Every aspect of safety that's in the federal regulations is covered. I don't know how to break it down much more simply than that.

Q. In that time period from 1976 to 1981 was one of the duties of the safety engineer for Rocky Hill to be sure that Pratt & Whitney was in compliance with OSHA regulations in that facility?

A. Yes.

Q. Was it also responsible for determining whether the measures necessary to comply or to meet the terms of the various MSDS sheets used at Rocky Hill were met?

A. Yes. Every aspect of safety came under our jurisdiction. When we had problems that were in the realm of industrial hygiene, we would get an industrial hygienist in to aid us in those problems or cover that area.

Q. Would it be fair to say if some specific situation arose which was beyond your area of expertise, there were other people in the company that you could call on for consultation to come in

* * *

[p. 18] Q. Were those MSDS sheets maintained here in Pratt & Whitney's central headquarters or head office -- for lack of a better word -- or were they maintained at the facility where the substances were utilized?

A. Both.

Q. In both locations?

A. Yes.

Q. At Rocky Hill where you just said the MSDS sheet would have been maintained, were those MSDS sheets available to the employees who would be working with these substances to consult if they had a desire to do so?

A. Yes.

Q. It's your belief and recollection that industrial hygiene and safety engineering did consult these MSDS sheets to implement the measures that they recommended?

A. Safety measures, yes.

Q. As part of implementing those safety measures, did that require periodic training of the operators who would be exposed to these substances as to what they should do?

A. Yes. Basically, what we did was, we used to go over them with the foreman and he was [p. 19] supposed to go over them with his employees and make sure that these recommendations were adhered to. One of the problems I remember that we had down there was food, drink and smoking material, which was posted to be kept out of that area.

Q. People would bring smoking materials or food materials into the work area?

A. Well, they would certainly in their pocket. They would forget sometimes, walk into the area and have them there. No smoking was posted in the area. I remember that and also, as I said, no foodstuffs, drinks or smoking materials.

Q. Now, some measures that can be utilized as controlled hazards might be referred to as engineering controls?

A. Sure.

Q. Those would be things like local exhaust ventilation?

A. Yes.

Q. Other measures are really defined or described as personal protection measures?

A. Personal protective equipment. Personal hygiene.

Q. The ones that I am interested in here insofar as employees are concerned are these

* * *

[p. 21] into the area because they might inhale or ingest chemicals that could be a problem.

Q. So, there were training sessions for the employees which included directives to use the barrier creams and to wear the gloves?

A. Yes.

Q. Do you recollect whether in Department 7144 there were also engineering controls for vapors or fumes?

A. Yes, I know we had exhaust ventilation in there. I can't remember all the machines in there. It's too long, but I do remember we had exhaust ventilation.

Q. Could you describe the exhaust ventilation that was utilized in Department 7144?

A. As I recall correctly, it was a backdraft, slotted backdraft.

Q. We have a record here that indicates that one of the ventilation hoods and installations had forced-air ventilation of 120 feet per second or per minute?

A. Per minute.

Q. Are there --

A. That's across the face velocity.

Q. Could you define across the face velocity; [p. 22] could you tell us what that means?

A. That means across the face area of a booth or area in which the person is working.

Q. At a work station?

A. It's like a vertical plane. That's the across area; 120 feet per minute through there.

Q. Are there engineering ratings for the amount of this forced-air ventilation?

A. Yes.

Q. In ascending scales?

A. There are minimum requirements.

Q. Could you describe those requirements?

A. For anything like this, like a paint spray booth is a minimum of a hundred feet per minute, lineal feet per minute, across the face of the booth or table or plane.

Q. Where are these requirements or directives found? Are they OSHA guidelines, industrial standards or in both places?

A. They're in the OSHA guidelines.

Q. Do you happen to recollect what provision or general subject area in the OSHA guidelines these requirements are articulated?

A. Yes. One is 1910, 107. I'd have to look at the book.

* * *

APPENDIX 9

IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF MASSACHUSETTS

CRUZ PEDRAZA, ET AL, Plaintiffs,	:	
vs.	:	Case No.
SHELL OIL CO., ET AL, Defendants.	:	85-0421 F

DEPOSITION OF RICHARD J. OWEN

October 1, 1987

* * *

[p. 8] and my answer was no.

Q. He said that the reference books that Pratt & Whitney had, among others, were Patty's *Industrial Hygiene* and the Sax reference handbook on hazardous materials and Cassarett and Douel's, *Toxicology* and the criterion documents for establishing threshold limit values by ACGIH; does that sound accurate?

A. We have some others, but they're more specialized or older general type references.

Q. The question that I have for you, since you started here at Pratt & Whitney in August 1976, were those same reference materials available at that time as well as today?

A. The Cassarett and Douel, it was newly published in 1975 or '76. When I came, I used it as a course reference in graduate college. So, I had the department buy it because it was a relatively new toxicology book. Those types of books generally don't appear very often.

The Patty's *Industrial Hygiene* and *Toxicology*, they had the most current one at the time and in the intervening time in '79 through '83 there's been complete revision and updating of Patty's *Industrial Hygiene*.

[p. 9] Q. The publications of ACGIH had what was available at that time?

A. That's correct. That's an ongoing yearly updated service.

Q. Those reference books, there may be new data created or new compounds or substances evaluated which may be added to it; is that correct?

A. That's correct.

Q. Let me ask you, out of curiosity, are there occasionally substances which are deleted from reference books like that, because nobody uses them anymore, or they're not made, or do they keep them all in there?

A. To my knowledge, they're kept in. They may, for the TLV's, revise the standards in there, and in most cases the concentrations you're allowed to be exposed to are reduced. On rare occasions they may be increased based on latest toxicological information.

Q. If a person was interested in ascertaining what general toxicological information was available on a particular chemical substance in 1976 or 1977 in Pratt &

Whitney, they would be able to consult the edition of Patty's [p. 10] *Industrial Hygiene* and Cassarett and Douel and ACGIH publication on criterion evaluation of chemical substances in order to ascertain what was in Pratt & Whitney's library at that time. They would have to look at that edition?

A. Yes.

Q. Those reference books were there, but not in the 1983 or '85 edition?

A. That's correct.

Q. It would have been the edition in effect at that time?

A. That's correct.

Q. At that time, let me show you we have marked here as Defendants' Exhibits 1, 2, 3 and 4, which were material safety data sheets provided in response to subpoena pertaining to products that contain epichlorohydrin, the products which are used by Pratt & Whitney in their workplace.

Broadly, let me ask you if you can recognize what these are?

A. The Exhibit 1 is a material safety data sheet from Shell Chemical Company that was received in the industrial hygiene group on October 29, 1980 for their trade name product, Epon Resin 828.

[p. 11] (Off the record discussion.)

THE WITNESS: Defendant's Exhibit 2 is a material safety data sheet from Detrex Chemical Company showing a received date of 9-22-75, referring to their material Detrex PERK.

Exhibit 3 is a material safety data sheet from the Ethyl Corporation, referring to their product perchlorethylene.

Defendants' 4 is a material safety data sheet from PPG Industries showing a received date of September 24, 1981, for their product, perchlorethylene.

BY MR. BALLANFANT:

Q. Mr. Lancour described for us a process that industrial hygiene and safety department utilizes of identifying the chemical substances which are used in the workplace at Pratt & Whitney, and then obtaining the industrial hygiene or safety information about those products first by attempting to get from the manufacturer MSDS sheets, and if those aren't available, going to the technical literature, medical references, toxicological references, or, I assume, individualized efforts to get the equivalent information from the manufacturer by telephone or [p. 12] letter, without being specific as to that.

Let me ask you this question: Is that the same process and practice that was followed by Pratt & Whitney in the time period from, approximately, 1976 to 1981 and '82?

A. That's correct.

Q. At the time that you joined the company, Pratt & Whitney, in 1976, was there a manager of industrial

hygiene and safety, or whatever the department with the equivalent functions was called at that time?

A. There was a supervisor of the industrial hygiene group by the name of Charles DeSimone and there was a department manager over industrial hygiene group and safety groups by the name of William Patton.

Q. Is industrial hygiene and safety at that time, or was, the terminology to describe the same department and same functions different?

A. The terminology was different. At that time it was health and safety engineering. Or abbreviated, HASE, H-A-S-E.

Q. Did that department perform the same functions, or have functions been rearranged as the department title has been changed?

* * *

[p. 30] liquid phase

At Pratt & Whitney we've taken one step beyond and have installed canvas closable covers over the top to further reduce any volatility of the products.

Q. When did you install those, approximately?

A. Those covers were in place when I joined Pratt & Whitney.

Q. In 1976?

A. That's correct.

Q. In 7144, is that an area were [sic] epoxy resins are mixed?

A. Yes.

Q. Do you recollect whether in 1976, 1977 there were any kind of engineering controls for epoxy resins?

A. Yes.

Q. Or for the work stations where epoxy would be mixed?

A. Yes.

Q. What kind of engineering controls were those?

A. The ones I recall were an exhaustive bench approximately eight feet long and two feet wide with back draft slide exhaust the length across [p. 31] the eight-foot length of the bench, at which point the employees would weigh out, mix and lay up their composite materials.

Q. I'm afraid we've had a certain amount of industrial hygiene nomenclature invade our deposition here. We have a table here that's maybe six to eight feet long. Is the size of this table at all analogous to a workbench or work-station here where epoxy resins may have been mixed?

A. The length is approximately the same, yes.

Q. The width may differ?

A. The width was approximately two feet wide.

Q. We have something here analogous, if not exactly like, the size that would be out there?

A. That's correct, as far as linear dimensions.

Q. When you talk about an exhaustive bench, can you describe how the equipment that you just described to us would look like if we brought it into this room?

A. The slotted back-draft hood would be flat pieces of sheet metal and learning [sic] at approximately 45 degrees to a circular duct located four or five feet above the workbench, [p. 32] with the flat part of the hood across the length of the bench, the eight-foot section, in which a plenum was created and two slots, approximately two inches wide, ran the length of the hood that is approximately eight feet long, thereby creating a uniform flow of air at various heights across the workbench.

Q. Would there be a fan suction vacuum that would be pulling the air across these slots or up into this hood? I'm straining to communicate this exactly how the air is introduced into this.

A. The nature of a hood is to capture and control contaminants. Therefore, by industrial hygiene definition, a ventilation system would require four components.

If I may enlighten everyone, a hood, duct work, fan and, in some cases, a filtration unit would constitute a ventilation system.

Therefore, by the nature of having a hood, it was exhausted by a fan. I believe it was located within the duct which is a common, normal practice for ventilation systems; to draw air at a known flow rate through the duct work, and, therefore, across the hood and work environment.

Q. Would that be ventilated outside?

[p. 33] A. That's correct.

Q. So that the vapors that might be given off by the process or by whatever was being worked with on the workbench surface would be drawn up into the hood and taken outside somewhere?

A. That's correct.

Q. Into the general atmosphere outside the plant?

A. That's correct.

Q. In Defendants' 5 there is a description of the materials that were mixed at this particular location. One is PWA 421-2 an isoproplidenediphenol epichlorohydrin resin. Would that be an epoxy resin?

A. Correct.

Q. What you have here are two agents which have to be mixed together in a process that could be cool curing or hot curing. Am I sort of in the ballpark?

A. The resin you described, Epon 828 is one component of a two-component system.

Q. It would have to be a resin mixed with it?

A. A curing agent.

Q. The curing agent is the aromatic polyamine?

[p. 34] A. That's correct.

Q. The aromatic polyamine is considered an epoxy resin or is not?

A. I would not consider it an epoxy resin within itself. As the curing agent for an epoxy resin system.

Q. Would the ventilation system that you described, would that be installed for purposes of addressing an inhalational hazard that would exist at that work site?

A. It would be installed to control vapors that would be coming off or could be released by a process. The assessment whether it would be hazardous or not would have to be made.

Q. Would there be any reason to install a local exhaust ventilation system unless there had been some determination that a potential hazard existed?

A. Sometimes ventilation systems are installed at Pratt & Whitney for employee comfort.

Q. Let me hand you Defendants' Exhibit 1, which has a section 8 that pertains to the special protection information, that's the heading and says, "Insofar as respiratory protection is concerned, in order to work around Epon Resin 828, [p. 35] there should be NIOSH approved respiratory protection equipment required to prevent vapor overexposure."

In the section, "Ventilation: Must be provided in mixing in application areas as required to control vapor exposure."

Let me ask you this question: If you could examine that and let me ask you, is the local exhaust ventilation system that you described in 7144 an engineering control system which would meet the requirements of that hazard communication?

A. In my opinion, yes.

Q. In working with chemical compounds, exposure can occur not only from fumes or vapors, but also in dermal contact through handling or spills or maybe actually even working with the material.

Is the department 7144, or what should I use?

A. It's usually used department 7144.

Q. In 7144 were the employees in that section provided any kind of personal protective equipment in the way of gloves, aprons, things of that sort?

* * *

[p. 39] Q. The employees were instructed in these safety procedures?

A. Yes, they were.

Q. In your experience do employees always follow the safety procedures that they're instructed in, or do sometimes they neglect those procedures?

A. I cannot speak for all employees. Based upon my experience, especially in that department at that time, based upon our activity there, employees were diligent in performing their use of personal protective equipment.

Q. Would you agree with me that ultimately the employee has to do these things, though?

A. Yes, it's the employee's responsibility to care for himself as not normal practice, but under the Occupational Safety and Health Act.

Q. In the general duty clause of the Occupational and Safety Health Act not only the employer has a general duty to provide a workplace free from recognized

hazards, but an employee has on obligation to provide for his own worker's safety?

A. That's correct. I believe that's section 5-B.

* * *

[p. 48] Q. Specifically, the question I'm asking here is, the material safety data sheet that you have here reflects a receipt date of October 1980 and a date of publication of March 1979.

It reflects that it's the second in this particular series of MSDS sheets, 23-2. So, a numbering system might meet an original, first replacement and second replacement.

Is it the practice of Pratt & Whitney to keep the old sheets as the new one comes in, or do they get the new one and discard the old one?

A. Yes. In many cases we would retain the older ones. Again, we may be receiving our first data sheet that might be fifth in a series from that particular vendor. We might not have 1 through 4, so we keep our most current one.

Depending on the information contained, if it's the same identical data sheet, we may not retain the one that's been replaced. We would keep the most current one. It we had intervening ones that were the same exact sheet, we would not retain multiple copies of the same sheet.

Q. Your recollection is that you either looked at this sheet or its predecessor because you looked at a Shell MSDS sheet in 1976 and 1977?

[p. 49] A. I would say in 1977 because that's when I was first involved with the product. Yes, I looked at a Shell material safety data sheet.

Q. To your recollection, at least insofar as Epon Resin 828 is concerned, Pratt & Whitney had no difficulty in obtaining those sheets from Shell, or maybe Shell submitted them with the shipments or whatever?

A. To my recollection, at the time we were obtaining material safety data sheets based on phone call requests or contacts at Shell.

Q. If you wrote or called or asked a salesman or whatever, the route you used to put in your request –

A. We would get a data sheet, yes, or we wouldn't use the product.

Q. Your statement is you wouldn't use the product if you didn't have a safety data sheet?

A. That's correct.

Q. In the time period of 1976 and 1977 is my understanding correct that it was the employer's responsibility to request that from the manufacturer, to request material safety data sheet?

A. I don't know if it was a requirement. It

* * *

APPENDIX 10

COMMONWEALTH OF MASSACHUSETTS

Hampden, ss Department of the Trial Court
Superior Court Department
No. 85-0421-F

CRUZ PEDRAZA,
Plaintiff

vs

SHELL OIL COMPANY,
Defendant

DEPOSITION OF: THOMAS F. SCHRAGER, taken before ROXANNE C. COSTIGAN, Notary Public-Stenographer, pursuant to Rule 30 of the Massachusetts Rules of Civil Procedure, at the offices of DOHERTY, WALLACE, PILLSBURY & MURPHY, 1414 Main Street, Springfield, Massachusetts, on June 6, 1988.

APPEARANCES:

EDWARD J. LEGA, ESQ., and
JOHN I. STEWARD, ESQ., Representing the Plaintiff

BURT BALLANFANT, ESQ., and
ROBERT LEONARD, ESQ., Representing the Defendant

Roxanne C. Costigan
Registered Professional Reporter

Certificate of Merit

* * *

[p. 6] A. Well, the first opinion I have formed is that Mr. Pedraza's asthma was related to exposure to epichlorohydrin. Number two, the warning on the MSDS for protective gear was inadequate for the type of work he was doing. And related to that, I guess you could say number 3 is that the ventilation system used was inadequate.

Q. Have you prepared a warning which you feel would have been adequate?

MR. LEONARD: Excuse me. Off the record.

(A recess was taken)

MR. BALLANFANT: Back on the record.

Q. (By Mr. Ballanfant) Do you have an opinion as to what an adequate warning would have said?

A. Yes, I do.

Q. And what would it have said?

A. Well, I think first of all it should have been more specific. It should have either [p. 7] specified using a personal respirator or if he was using some type of non-personal ventilation system, it should have been very specific in terms of what that would involve. What was listed on the MSDS was basically to use appropriate ventilation and that was just not detailed enough for this type of chemical.

Q. Do you have an opinion as to what ventilation system would have been adequate?

A. Yes. What we call an enclosed hood in which there would be side walls, a front wall, which would

include two slots in the glass so the individual could just put his hands through into the area that he was mixing, so that his head and breathing space would be totally separated from the chemical involved.

Q. Have you ever observed such hood?

A. Yes. I use such a hood.

Q. Where do you use it?

A. At Boston University School of Medicine.

Q. What materials do you work with when you use it?

A. Carcinogens, toxic chemicals.

Q. What toxic chemicals do you work with

* * *

[p. 87] Q. In fact, they're under a statutory duty under the general duty clause to ascertain the hazards that the substances their employees are working with pose?

A. Well, a lot of the guidelines they're given are somewhat general. That's one of the purposes of MSDS, that the manufacturer provides them with specific guidelines on how to carry out those goals.

Q. In fact, the purpose of MSDS is to warn, is to specify what chemical substances they're working with, to identify the chemical substances that are contained in the products?

A. Well, more that that, to also identify health hazards and how to protect the employees against those health hazards.

Q. And in this case, Pratt and Whitney had determined that they would use local exhaust ventilation?

A. I'm not –

Q. That Pratt and Whitney had installed local ventilation at his workbench?

A. Had they installed it?

[p. 88] Q. The records in this case that you reviewed revealed that Pratt and Whitney installed local exhaust ventilation in this case?

A. Yes.

Q. Is it your understanding that Pratt and Whitney is under an obligation to follow the statutes and regulations of OSHA?

A. Yes.

Q. Now, let me just hand you the Niosh criteria document that we previously identified as Defendant's Exhibit 1. The section that I'm going to call your attention to is Section I, Environmental Workplace Air, and its says, "Concentration," it appears about halfway down the middle of the second page.

A. Yes.

Q. And it describes "Occupational exposure to epichlorohydrin shall be controlled so that employees are not exposed to epichlorohydrin at concentrations greater

than 2 milligrams per cubic meter of air (approximately .5 parts per million parts of air by volume) determined as a TWA concentration for up to a ten hour workday, forty [p. 89] hour work week, with a ceiling concentration of 19 milligrams per cubic meter of air as determined by a sampling time of fifteen minutes." And is that the recommendation that we are talking about as being the OSHA limit, the OSHA LTV?

A. Yes.

Q. And that is that when you reduce all that down, it comes down to five parts per million?

A. Right. Well, or is it two – well, the 19 would be five parts per million.

Q. This is 1976?

A. Yes.

Q. We're taking this on kind of a time continuum. Then on page 6 if you could look at that, we have a subsection B, Respiratory Protection, and it appears under overall Section IV, Personal Protective Equipment, it says, "Engineering controls shall be used to maintain epichlorohydrin concentrations below the recommended environmental limits. Such control equipment shall be sparkproof. Compliance with the permissible exposure limit may not be achieved by the use of respirators except during the time necessary to install or test the [p. 90] required engineering controls, for nonroutine maintenance or repair activities in which brief exposures at concentrations in excess of the recommended limits may occur, and during emergencies when air concentrations of epichlorohydrin may exceed the recommended limits."

So, the directive by the National Institute of Occupational Safety and Health is that engineering controls shall be used instead of personal protective equipment. Do you agree with that?

A. Yes.

Q. And that Pratt and Whitney was under statutory duty to comply with this?

A. Yes.

Q. Let me hand you what is going to be marked as Defendant's Exhibit 5, which are the OSHA regulations which appear at 29 CFR 1910.1000. And let me refer you to a sub part E. Actually, I guess maybe we should start at the top, it says 1910.1000, Air Contaminants. And I'll read the first sentence, it says, "An employee's exposure to any material listed in table Z-1, Z-2, or Z-3 of this section shall be limited in accordance with the requirements [p. 91] of the following paragraphs of this section," is that correct?

A. Yes.

Q. And when you refer to table Z-1, that the compound epichlorohydrin appears there, with five being the parts per million and then it references in that chart, it references a sub part A which says parts of vapor or gas per million in contaminated air by volume. So what we would be talking about, and there is where the five part per million threshold value limit appears and this is the regulation that establishes it, is that correct?

A Right. This is from skin.

Q. Subsection E says, "To achieve compliance with paragraphs A through D of this section, administrative or engineering controls must first be determined and implemented whenever feasible." And engineering controls are what we're talking about where we are talking about local exhaust ventilation, is that correct?

A. Yes.

Q. And it says, "When such controls are not feasible to achieve full compliance, protective [p. 92] equipment or any other protective measures shall be used to keep the exposure of employees to air contaminants within the limits prescribed in this section," is that correct?

A. Yes.

Q. Would you agree with me that under that OSHA statute, that engineering controls are required?

A. Yes.

Q. To the exclusion of personal protective gear?

A. If they're adequate.

Q. If they're adequate?

A. Yes.

Q. Okay. Do you have any basis in fact or by calculation that the engineering controls implemented by Pratt and Whitney were ever exceeded at the work station that Cruz Pedraza worked at?

A. Were exceeded?

Q. Were exceeded.

A. The engineering controls?

Q. That the threshold limit values established by OSHA were exceeded –

A. No, I don't have any evidence concerning [p. 93] that.

Q. – at the work place? The only measurements that we actually have are that they met that standard, is that correct?

A. Pardon me?

Q. The only measurements that we have or information that we do have is that that standard was met?

A. In that one measurement, yes.

Q. That one measurement?

A. Yes.

Q. Are you aware of any other measurements?

A. No.

Q. Let me hand you what's been marked as or will be marked as Defendant's Exhibit 6.

(Defendant's Exhibit 5, OSHA document, marked for identification.

(Defendant's Exhibit 6, OSHA document, marked for identification)

[p. 94] Q. (By Mr. Ballanfant) In referring on page 342 to Section 1910.134 A-1, the OSHA regulations provide that "In this control of those occupational diseases caused by breathing air contaminated with harmful

dusts, fogs, fumes, mists, gases, smokes, sprays, or vapors, the primary objective shall be to prevent atmospheric contamination. This shall be accomplished as far as feasible by accepted engineering control measures." Is that what the regulation provides?

A. Yes.

Q. Local exhaust ventilation is an accepted engineering control measure, isn't it?

A. Yes.

Q. And then the last sentence of that subsection is that "When effective engineering controls are not feasible, or while they are being instituted, appropriate respirators shall be used pursuant to the following requirements." By way of specificity, the regulations that I have asked you to read are those which are copied from the 1986 edition of the Code of Federal Regulations. Do you have any [p. 95] basis to state that the same regulations weren't in effect in 1976?

A. No, I don't.

Q. So that the requirements as set out under the OSHA regulations and under the statute are that an employer is required to implement the engineering measures to meet the threshold limit values established by OSHA?

A. Yes.

Q. And that's what Pratt and Whitney chose to utilize in this case?

MR. LEJA: If you know.

Q. (By Mr. Ballanfant) If you know?

A. Yes, I don't know.

Q. Have you –

A. It's not clear to me whether –

Q. Have you read the depositions of Mr. Owen?

A. Yes.

Q. And did he describe an air ventilation system that Pratt and Whitney had installed at the work place of Cruz Pedraza?

A. Yes, he did.

[p. 96] Q. You're not aware of any measurements at that work place that showed that the threshold limit values for epichlorohydrin were ever exceeded at that work place?

A. I was not aware of any measurements taken at that work station.

Q. And the only measurements that we have of the work station believed by Mr. Owen to be equivalent to Mr. Pedraza's and neither of us were there to verify that?

A. Yes.

Q. Reflects that there was either no epichlorohydrin there or that it was below the OSHA threshold limit values?

A. Based on that one study, yes.

Q. Just as kind of a throw away question and maybe we'll break for lunch and we can or break for a quick

sandwich, it doesn't look like we'll have time for a long lunch, and this is totally unrelated so you can loosen up a little bit, I'm not going to badger you or anything like that right now.

A. That's okay.

Q. Have you, Dr. Schrager, ever filed any

* * *

Internal
Correspondence

UNITED
(Seal) TECHNOLOGIES
PRATT & WHITNEY
AIRCRAFT

To G. W. Lancour, CIH

From R. J. Owen, CIH, CSP
Ext. 52365

Subject Compensation Claim/Suit
of Cruz Pedraza,
HCN 241925

cc: G. E. Parsons,
CIH, CSP
R. F. Sorenson,
M.D.

January 7, 1985

This memo is written to provide overall information regarding a request for information from Frank R. Saia, Attorney, who apparently is representing Mr. Pedraza for some unspecified purpose. Specifically, Mr. Saia's letter of December 27, 1984 stated: "We are seeking the name and address of the manufacturer of epichlorhydrin (sic) which was used by you in the years 1977-'81. Would you be so kind as to check you [sic] records and to advise us of the name and address of the manufacturer". Signed Frank R. Saia.

What Mr. Saia is apparently referring to is the chemical epichlorohydrin (CAS#106-89-8) which is used as a component material in the manufacture of epoxy resins by other companies whose products that Mr. Pedraza used when he worked in D/7144. A letter to Mr. Saia clarifying his request may be in order. Another potential area for exposure is that epichlorohydrin is/was used as a stablizer [sic] (generally less than 1%) in various chlorinated

hydrocarbon degreasing fluids such as PMC 9003 Trichloroethylene, PMC 9015/PMC 9088 Perchloroethylene and PMC 9056 Methyl Chloroform. It is believed that only PMC 9056 degreasing fluid was used in Rocky Hill in the recent years.

There are five numbered sections below which provided more information.

1) Pratt & Whitney work history of Mr. Pedraza, DOB 10-7-49

10-72: Hired into D/7144 as a bench worker plastics.

4-73: Dismissed for poor attendance.

8-73: Rehired into D/7144 as bench worker plastics – Job Code 578.1.

2-74: In D/7144 as multi-machine operator – plastics J.C. 578.2.

3-74: In D/7144 as Plastics Molder, J.C. 578.3.

1-78: Transferred to D/7159 as ECM Operator.

7-81: Last day worked – in D/7159 and at Pratt & Whitney.

6-22-82: Laid off due to reduction in force.

2) Industrial Hygiene Records

In July, 1984 a request from Dr. Sorenson prompted a review of various Industrial Hygiene records. A copy of this memo is attached. Of note in this July 20, 1984 report was an April, 1982 Access to Records Request by Mr. Pedraza for information on a maskant, PMC 1801. Also of note from the memo to Dr. Sorenson, is the Epon 828 Material Safety Data Sheet (MSDS) statement regarding the very low concentration of epichlorohydrin (Epon 828 MSDS).

3) Industrial Hygiene Sampling Results

Listed below are the memos which specifically mention Mr. Pedraza or air sampling for epichlorohydrin in D/7144. In many cases, when a chlorinated solvent was sampled, epichlorohydrin was also checked and these results were summarized in the July 20, 1984 memo to Dr. Sorenson.

Memos which mentioned Mr. Pedraza specifically were dated;

July 16, 1977 – copy enclosed.

October 7, 1977 – copy enclosed.

July 20, 1984 – copy enclosed.

Additionally, results of samples collected on other employees working with resins made from epichlorohydrin were:

Dated June 11, 1979 describing a May 9, 1979 survey of mixing a small amount of PWA 635-2 (same as was mixed by Mr. Pedraza).

Epichlorohydrin results were for each sample number:

79-07-0250 <0.3mg/M^3 – Personal sample

79-07-0252 <0.9 mg/M^3 – Area sample

Dated December 20, 1983 for a survey, an October 31, 1983 during an Epon 1031. Acetone mixing job. Two sets of morning and afternoon personal samples were reported.

The Epichlorohydrin sampling results were:

83-07-0826 <0.055 mg/M^3 a.m.

83-07-0827 <0.086 mg/M^3 p.m.

83-07-0828 <0.063 mg/M^3 a.m.

83-07-0829 0.092 mg/M^3 p.m.

It is believed that Mr. Pedraza's exposure would be comparable for the limited exposure in the specified time period 1977 – 1981.

4) Additional information on Epichlorohydrin

The National Institute for Occupational Safety and Health (NIOSH) issued their current intelligence Bulletin #30 on October 12, 1978 on Epichlorohydrin. Additionally, NIOSH issued a Technical Report (78-151) on Epichlorohydrin Manufacture and Use . . . Industrial Hygiene Survey. Both documents are in the Industrial Hygiene Library.

Also attached are MSDS's for PMC 9015 and PMC 9088 showing the relative concentrations of epichlorohydrin. As part of this product information there is a MSDS on epichlorohydrin, also attached.

Detailed toxicological information on epichlorohydrin can be found beginning on Page 2242 of Vol. 2A of Patty's Industrial Hygiene & Toxicology 3rd Revised Edition.

One must keep in mind that the toxicological effects generally reported on the data sheet and in tests involve 100% epichlorohydrin. The amount of unreacted epichlorohydrin in an epoxy resin is reported to be in the low 1-10 ppm range by the manufacturer. (See attached MSDS for Shell's Epon 828 aka PWA 421). Airborne concentrations epichlorohydrin from the extremely low amount of available unreacted materials is believed to be practically nonexistent.

5. Specific Answers to the Inquiry Letter

> The request could be answered several ways. One way is to state "we did not use epichlorohydrin as an identifiable chemical in our operations". (It was used to make the resin or as stablizer [sic] in degreasing fluid that Pratt & Whitney used and may be present as trace contaminants).
>
> Another answer is to provide the following information:
>
> The resin manufacturer from products used in D/7144 was: Shell Chemical Company, 1 Shell Plaza, Houston, Texas
>
> The PMC 9056 degreaser fluid supplier's have varied over the years but have generally been: PPG Industries, One Gateway Center, Pittsburg, PA 15272 or Dow Chemical USA, Midland, MI 48640

A record search by Purchasing would have to be conducted to determine the supplier(s) during the period of Mr. Pedraza's employment. Providing information on the degreasing fluid and its composition broaden the scope of whatever Mr. Pedraza is alleging.

In summary, I would recommend that Mr. Saia be requested to be more specific in his "shot-in-the-dark" request and purpose for this information in order to limit potential liability. Based on what materials were used, the very low concentration of any free epichlorohydrin in these materials, Mr. Pedraza's extremely limited use of these materials in the specified time period (1977-1981) and results of air samples, it is not realistic to expect

adverse health effect to be evident from the epichlorohydrin.

/s/ Richard J. Owen
Richard J. Owen, CIH, CSP
Industrial Hygiene & Safety

RJO:bh

Note: Mr. Pedraza had/has a workers' compensation claim, LMI 119-1664-395 (77-10-27) which may have some bearing on this request.

APPENDIX 11

UNITED STATES DISTRICT COURT

DISTRICT OF MASSACHSSETTS [sic]

Civil Action
No. 85-0421-F

CRUZ PEDRAZA, et als,
Plaintiffs,

vs.

SHELL OIL COMPANY,
Defendant.

DEPOSITION OF: BYUNG K. KWON, taken before John R. Hunt, Jr., Notary Public-Stenographer, pursuant to Rule 30 of the Federal Rules of Civil Procedure, at the offices of EDWARD V. LEJA, ESQ., 1331 Main Street, Springfield, Massachusetts, on September 8, 1988.

APPEARANCES:

MORIARTY, DONOGHUE & LEJA, P.C., 1331 Main Street, Springfield, Massachusetts, representing the Plaintiffs.

BY: EDWARD V. LEJA, ESQ.

BURT BALLANFANT, ESQ., P.O. Box 2463, Houston, Texas, 77001, representing the defendant.

DOHERTY, WALLACE, PILLSBURY & MURPHY, P.C., 1414 Main Street, Springfield, Massachusetts, representing the Defendant.

BY: BARRY M. RYAN, ESQ.

John R. Hunt, Jr.
Court Reporter

[p. 5] A My name is Byung K. Kwon.

Q Where do you live, sir?

A I live in Bethesda, Maryland.

Q And your occupation?

A I'm a consultant in occupational and environmental health and safety.

Q Could you tell us a little bit about your educational background?

A Yes, my resume will cover the whole thing.

I have a Master of Science in public health from the University of North Carolina, the School of Public Health.

MR. LEJA: (TO MR. BALLANFANT) If you have no objection to marking this, we might as well mark it.

MR. BALLANFANT: Okay.

(KWON CURRICULUM VITAE, MARKED PLAINTIFF'S EXHIBIT 1, FOR IDENTIFICATION.)

BY MR. LEJA:

Q Mr. Kwon, Plaintiff's Exhibit 1 which has just been marked is a copy of your curriculum vitae; is that [p. 6] correct?

A That's correct.

Q What experience have you had subsequent to your Master's Degree in your profession, sir?

A That's quite many years.

Q Let's start with – when did you get your Master's Degree?

A 1964.

Q Okay.

A Let me cover the subsequent years, since you asked me.

I spent from 1964 to 1971 in, basically, toxicological research as well as in a practice of industrial hygiene.

Subsequent to that, from 1971 to 1973 I entered into a management position of occupational safety and health in the environment with Tenneco Company. And then I had a similar position with the Kennecott Copper Corporation.

Subsequent to that, in the end of 1974, I joined the Occupational Safety and Health Administration, and I was responsible for various things, including initially setting health standards [p. 7] dealing with chemicals.

And then in the subsequent two years, I was responsible for nationwide enforcement of the regulations.

And then mid 1977, I came out and became consultant in occupational safety and health and environment. And currently, I am with the National BioSystems, Inc., which the consulting in occupational safety and health and environment is a portion of the business.

Q Okay. I assume that you're the principal of National BioSystems?

A That's correct.

Q The sole stockholder?

A No.

Q Majority stockholder?

A Yes.

Q And that corporation apparently was formed in 1988?

A Yes, March of this year.

Q Okay. And prior to that you were Chairman of ROW Sciences, Inc. What was that?

A That was also a biomedical consulting firm.

Q Were you a stockholder in that or just an employee?

* * *

[p. 34] you use; depending upon what kind of areas you're using, and depending upon duration of use. These are the things you have to have.

And, by the way, these material safety data sheets, especially in this section, you have to comply with OSHA regulation 29CFR1910.1000,(e). And that has to be combined with this recommendation here. So then you can evaluate how adequate this is.

Q What does that regulation say?

A That is the method of compliance dealing with – you must utilize engineering control first. And when engineering control is not feasible or effective, then you resort to personal protection. You have to combine that.

That's why I went through with you one by one what these mean. I said if you have.

In addition, that respiratory protection section, you also have to utilize 29CFR1910.134, which requires you to – this is to the employer. It has nothing to do with the manufacturer. Employers have to monitor and find out what kind of levels you have before you select any protection measures.

APPENDIX 12

Calendar No. 1300

91ST CONGRESS) SENATE (REPORT
2d Session) (No. 91-1282

OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970

OCTOBER 6 – (legislative day, OCTOBER 5), 1970. –
Order to be printed

Mr. WILLIAMS of New Jersey, from the Committee on Labor and Public Welfare, submitted the following

REPORT

together with

INDIVIDUAL AND MINORITY VIEWS

[To accompany S. 2193]

The Committee on Labor and Public Welfare, to which was referred the bill (S. 2193) to authorize the Secretary of Labor to set standards to assure safe and healthful working conditions for working men and women, to assist and encourage States to participate in efforts to assure such working conditions, to provide for research, information, education, and training in the field of occupational safety and health, and for other purposes, having considered the same, reports favorably thereon with an amendment (in the nature of a substitute) and recommends that the bill (as amended) do pass.

PURPOSE

The purpose of S. 2193 is to reduce the number and severity of work-related injuries and illnesses which, despite current efforts of employers and government, are resulting in ever-increasing human misery and economic loss.

The bill would achieve its purpose through programs of research, education and training, and through the development and administration, by the Secretary of Labor, of uniformly applied occupational safety and health standards. Such standards would be developed with the assistance of the Secretary of Health, Education and Welfare, and both their promulgation and their enforcement would be judicially reviewable. Encouragement is given to Federal-state cooperation, and financial assistance is authorized to enable states, under approved plans, to take over entirely and administer their own programs for achieving safe and healthful jobsites for the Nation's workers.

APPENDIX 13

UNITED STATES DISTRICT COURT

DISTRICT OF MASSACHUSETTS

CRUZ PEDRAZA, ET AL., Plaintiffs,	§	
v.	§	CIVIL ACTION
SHELL OIL COMPANY,	§	NO. 85-0421-F
Defendant.	§	

SHELL OIL COMPANY'S MOTION FOR SUMMARY JUDGMENT

The defendant, Shell Oil Company, moves the Court to enter summary judgment in its favor on the claims by all the plaintiffs. As grounds for the motion, the defendant contends that the plaintiffs' claims are barred by the applicable statutes of limitations and that under the applicable law Shell discharged its duty to warn.

In support of its motion, the defendant submits the attached Memorandum with supporting documentation.

Respectfully submitted,
SHELL OIL COMPANY

/s/ Burt Ballanfant

Burt Ballanfant
4794 One Shell Plaza
P.O. Box 2463
Houston, Texas 77252
(713) 241-7023

Robert Leonard
DOHERTY, WALLACE,
PILLSBURY & MURPHY, P.C.
One Monarch Place
19th Floor
1414 Main Street
Springfield, MA 01144
(413) 733-3111

CERTIFICATE OF SERVICE

I, Burt Ballanfant, hereby certify that on the 22nd day of June, 1988, I served a copy of Shell's Motion for Summary Judgement by first class mail on Edward V. Leja, Esq., 1331 Main Street, Springfield, MA 01103.

/s/ Burt Ballanfant
Burt Ballanfant

* * *

have been moved or disassembled and the ability to ascertain the other chemicals with which Mr. Pedraza worked and which may have been the cause of his condition has been eliminated. Oakes Deposition, pp. 21-24, 49-50, 61-62, (Exhibit P) and Pedraza Deposition, pp. 55-56. (Exhibit 0.) The plaintiff has the burden of showing that he has met the statute of limitations which he has clearly failed to do under the *Celotex* case. This Court is bound to follow the law as articulated by the Circuit Court in *Cornell* and should hold on the *same* facts as previously considered by this Court in favor of Shell on this statute of limitations issue but given the significant new facts unearthed by Shell on discovery the Court has

no choice but to grant Shell's motion for summary judgment based on the statute of limitations.

FACTS AS TO SOPHISTICATED USER

Mr. Richard Owen is a Senior Industrial Hygienist and a board certified industrial hygienist for Pratt and Whitney and was at the time Mr. Pedraza alleges his exposure occurred. Mr. Owen testified that the ACGIH criterion documents were available to Pratt and Whitney. Owen Deposition, pp. 9-10. (Exhibit P.) Mr. Owen also testified to Pratt and Whitney's extensive library on the toxicology of the products it used. Owen Deposition, pp. 8-9. Pratt and Whitney had acquired the Shell MSDS Sheets for Epoxy Resin. Owen Deposition, pp. 48-50. These MSDS sheets were available at the Rocky Hill Plant where Pedraza worked. Schibi Deposition, p. 18. (Exhibit Q.) Engineering controls were implemented at Cruz Pedraza's workbench (Owen Deposition. Schibi Deposition, p. 21) to meet OSHA regulations. Schibi Deposition, p. 22. He would expect that the local exhaust ventilation system met the requirements of the Shell MSDS sheet. Owen Deposition, p. 35. Pratt and Whitney recognized their duty as an employer to provide a workplace free from recognized hazards under OSHA. Owen Deposition, p. 39.

LEGAL ARGUMENT

In light of the foregoing, Shell is entitled to summary judgment as to plaintiffs warning claims because (1) Shell fulfilled its duty to warn; and (2) Shell in fulfilling its duty to warn is legally entitled to rely on Pratt and

Whitney's actual or constructive knowledge as a sophisticated user under § 388 of the Restatement of Torts and under OSHA regulations and law as a member of an industry using particular products to know of or to ascertain the hazards of epichlorohydrin.

The Occupational Safety and Health Act of 1970, 29 U.S.C. § 651 et seq., prescribes and regulates the duties and obligations of employers and employees. The effective date of this Act is June 29, 1971. Mr. Pedraza worked at Pratt & Whitney entirely after the effective date of the OSHA Act. The most significant provision of that Act is the general duty section which provides:

> (a) Each employer –
>
> (1) shall furnish to each of his employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees.
>
> (2) shall comply with occupational safety and health standards promulgated under this Chapter.
>
> (b) Each employee shall comply with occupational safety and health standards and all rules, regulations, and orders issued pursuant to this Chapter which are applicable to his own actions and conduct. 29 U.S.C. § 654.

This provision has been universally interpreted to place an employer on notice of recognized hazards about which the employer has actual knowledge. *Brennan v. Occupational Safety & Health Review Comm.*, 494 F.2d 460,

463-464 (8th Cir. 1974); see also, *Magma Cooper Co. v. Marshall*, 608 F.2d 373 (9th Cir. 1979) and *National Rlty & Const. Co. v. Occupational Safety & Health Rev. Comm.*, 489 F.2d 1257 (D.C. App. 1973). The significant part of the OSHA Act is that an employer is also charged with the knowledge of recognized hazards in the industry of which it is a member even if the employer has no actual knowledge of the hazard. The term "recognized hazard" received a precise definition during the floor debate over the general duty clause:

> A recognized hazard is a condition that is known to be hazardous, and is known not necessarily by each and every individual employer but is known taking into account the standard of knowledge in the industry. 116 Cong. Rec. (Part 28) 38377 (1970).

That knowledge imputed to an employer is virtually identical to the knowledge imputed to a manufacturer in products litigation in *Borel v. Fibreboard Paper Products Corp.*, 493 F.2d 1076, 1089 (5th Cir. 1973) when the Court said:

> Furthermore, in cases such as the instant case the manufacturer is held to the knowledge or skill of an expert.

The federal appeals courts in applying the OSHA general duty clause have strictly followed the legislative history. *Usery v. Marquette Cement Mfg. Co.*, 568 F.2d 902, 909-910 (2nd Cir. 1977); *Titanium Metals Corp. of America v. Usery*, 579 F.2d 536, 540-542 (9th Cir. 1978); *Continental Oil Co. v. Occupational Safety & Health Rev. Comm.*, 630 F.2d 446 (6th Cir. 1980). Courts have focused on determining the specific industry which has the constructive knowledge. See,

Donovan v. General Motors Corp., 764 F.2d 32, 36-37 (1st Cir. 1985). While clarifications of the employer's knowledge of workplace hazards may occur, there is no longer any debate that such knowledge is both actual knowledge or constructive knowledge of the hazards of that particular industry. Therefor, Pratt and Whitney as user-employer of Shell Expoxy Resin has or is charged with the same knowledge that Shell has as to the hazards of a product about which Shell has a duty to warn.

The doctrine known as the sophisticated user defense had been recognized at common law for many years. *Rosebrock v. General Electric Co.*, 140 N.E. 571 (N.Y. 1923). The Restatement of Tort (Second) § 388 succinctly summarized the concept as follows:

> One who supplies directly through a third person a chattel for another to use is subject to liability to those whom the supplier should expect to use the chattel with the consent of the other or to be endangered by its probable use, for physical harm caused by the use of the chattel in the manner for which and by a person for whose use it is supplied, if the supplier:
>
> (a) knows or has reason to know that the chattel is or is likely to be dangerous for the use for which it is supplied, and
>
> (b) has no reason to believe that those for whose use the chattel is supplied will realize its dangerous condition, and
>
> (c) fails to exercise reasonable care to inform them of its dangerous condition or the facts which make it likely to be dangerous.

The pertinent comments are found in Comment K, Comment L, and Comment N of the Restatement of Torts (Second).

Section 388 of the Restatement of Torts (Second) was included in the 1934 version of the Restatement of Torts. The principal case interpreting Section 388 was *Hopkins v. E.I. DuPont deNemours and Company*, 212 F.2d 623 (3rd Cir. 1954). Judge Hastie explicitly ruled that DuPont had no duty to warn of a potential hazard when the knowledge of the hazard or the opportunity to gain such knowledge of the employer was similar to that of the manufacturer.

The Restatement of Torts (Second) continued Section 388. The sophisticated user defense was incorporated in a new Comment K. The United States Court of Appeals for the 10th Circuit in *Marker v. Universal Oil Products Company*, 250 F.2d 603 (10th Cir. 1957) applied Section 388 in holding that the supplier did not have a legal duty to warn of the dangers in a product where the sophisticated user has technical knowledge equivalent to the product suppliers. The Marker case as well as the predecessor case of Hopkins were negligence cases that did not involve the application of the sophisticated user defense to a products liability claim.

Courts have since applied the sophisticated user defense in both strict liability and negligence cases. *Jacobson v. Colorado Fuel and Iron Corporation*, 409 F.2d 1263 (9th Cir. 1969); *Martinez v. Dixie Carriers, Inc.*, 529 F.2d 457 (5th Cir. 1976); *Bradco Oil & Gas Co. v. Youngstown Sheet & Tube Co.*, 532 P.2d 501 (5th Cir. 1976); *Reed v. Penwalt Corporation*, 591 P.2d 478 (Wash. App. 1979) (see the facts noted by the Court to find the employer a sophisticated user

which are not as great as those in this case); *Rost v. C. F. & I. Steel Corporation*, 616 P.2d 383 (Mont. 1980); *Marshall v. H. K. Ferguson Company*, 623 F.2d 882 (4th Cir. 1980); *Strong v. E.I. DuPont De Nemours and Company*, 667 F.2d 682 (8th Cir. 1981); and *Goodbar v. Whitehead Bros.*, 591 F. Supp. 552 (W. Va. 1984), *affd. sub nom. Beale v. Hardy*, 769 F.2d 213 (4th Cir. 1985). In this case Pratt and Whitney acknowledged its knowledge both as to regulations as well as hazards but, more importantly, Pratt & Whitney took the precautions prescribed by the OSHA regulations; therefor, the record is clear that Pratt & Whitney had actual knowledge of the hazards of epichlorohydrin.

In this case Shell clearly has the legal right to rely on a sophisticated user defense because under the OSHA Act Pratt and Whitney has or was charged with the same knowledge of product hazards as Shell has. Accordingly, Shell is entitled to summary judgment as a matter of law on the warning issue.

CONCLUSION

The facts of this case fully demonstrate that (1) Mr. Pedraza knew or should have known of the alleged causal connection between his exposure to epichlorohydrin and his asthma condition several years before the statute of limitations expired and (2) Pratt & Whitney was a sophisticated user to whom Shell had given warnings sufficient to discharge its warning duty

under the law; accordingly, Shell is entitled as a matter of law to summary judgment in its favor.

Respectfully submitted,

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CERTIFICATE OF SERVICE

I, Burt Ballanfant, hereby certify that on the 22nd day of June, 1988, I served a copy of Shell's Motion for Summary Judgement by first class mail on Edward V. Leja, Esq., 1331 Main Street, Springfield, MA 01103.

/s/ Burt Ballanfant
Burt Ballanfant

APPENDIX 14

UNITED STATES DISTRICT COURT

DISTRICT OF MASSACHUSETTS

CRUZ PEDRAZA, *ET AL.*, Plaintiffs,	§	CIVIL ACTION NO. 85-0421-F
VS.	§	
SHELL OIL COMPANY, Defendant.	§	

SHELL OIL COMPANY'S MOTION TO DISMISS FOR LACK OF JURISDICTION OR ALTERNATIVELY, FOR SUMMARY JUDGMENT BASED UPON PREEMPTION

The defendant, Shell Oil Company, moves the Court pursuant to Federal Rule of Civil Procedure 12(b)(6) to dismiss this lawsuit for lack of jurisdiction or alternatively to enter summary judgment pursuant to Federal Rule of Civil Procedure 56 in its favor on the claims by all the plaintiffs. As grounds for the motion, the defendant contends that pursuant to the Occupational Safety and Health Act this Court lacks jurisdiction of plaintiffs claims or alternatively Shell is entitled to summary judgment under the Preemption Doctrine.

In support of its motion, the defendant submits the attached Memorandum with supporting documentation.

Respectfully submitted,

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CERTIFICATE OF SERVICE

I, Burt Ballanfant, hereby certify that on the 14th day of December, 1989, I served a copy of the foregoing document by first class mail on Edward V. Leja, Esq., 1331 Main Street, Springfield, MA 01103.

/s/ Burt Ballanfant
Burt Ballanfant

UNITED STATES DISTRICT COURT
DISTRICT OF MASSACHUSETTS

CRUZ PEDRAZA, *ET AL.*, Plaintiffs,	§	CIVIL ACTION NO. 85-0421-F
VS.	§	
SHELL OIL COMPANY, Defendant.	§	

SHELL OIL COMPANY'S MEMORANDUM IN SUPPORT OF MOTION TO DISMISS FOR LACK OF JURISDICTION OR ALTERNATIVELY, FOR SUMMARY JUDGMENT BASED UPON PREEMPTION

SHELL OIL COMPANY ("Shell") hereby files this Motion to Dismiss pursuant to Federal Rule of Civil Procedure 12(B)(6) or Alternatively, Motion for Summary Judgment pursuant to Federal Rule of Civil Procedure 56.

UNDISPUTED FACTS

The deposition of plaintiff's warning expert Dr. Schrager narrowed the alleged inadequacy of the warning issue to Shell's alleged failure to provide:

a. Specific instructions that enclosed hood ventilation was to be used in work areas, and

b. Instructions "that respirators be used by workers", See Schrager Deposition pp. 6-7.

As to these warning issues, Pratt and Whitney readily admitted that they knew of the statute controlling worker safety – the Occupational Safety and Health Act, 29 U.S.C. § 651, *et seq.* and regulations pertaining to

respiratory protection issued thereunder, 29 C.F.R. § 1910.134, *et seq*. These regulations and statute preempt state regulatory or common law remedies; therefore Pratt and Whitney clearly had received an adequate warning because they had implemented the measures required by OSHA regulations and the NIOSH Criteria Document, on which Dr. Schrager principally if not exclusively relied to form the basis of his opinions.

Richard Owen testified as a certified industrial hygienist that the issue of worker protection is generally governed by the OSHA general duty clause and was supported in his view by Dr. Schrager. Owen Deposition, p. 39 (all Owen pages attached as Exhibit A); Schrager Deposition, p. 69 (all Schrager pages attached as Exhibit B). Mr. Schibi, a safety engineer for Pratt and Whitney, testified that one of his duties was to ensure compliance with OSHA regulations. Schibi Deposition, p. 11 (all Schibi pages attached as Exhibit C).

Within that overall regulatory scheme both Mr. Owen and Dr. Schrager agreed that the measures needed to provide respiratory protection are governed by the OSHA respiratory protection regulation, specifically 29 C.F.R. § 1910.134. Schrager Deposition at pp. 85-98 and Owen Deposition at p. 35. Additionally, Byung K. Kwon who was the OSHA official responsible for setting and enforcing health standards for chemicals at the pertinent times has stated that the controlling issues in this case are governed by OSHA regulations. See, Kwon Deposition, Exhibit D, pp. 5-7, 34, and 45. Mr. Schibi testified as to the legal necessity for employers to comply with these OSHA regulations. See also, 29 C.F.R. §§ 1910 and 1910.134.

Schibi Deposition at p. 22. Dr. Schrager admitted under examination in his deposition that:

(1) Pratt and Whitney must follow government statutes and regulations [Schrager Deposition, p. 83; See also Kwon Deposition, *supra*];

(2) there was an OSHA standard of 5 ppm for epichlorchydrin in 1976 [Schrager Deposition, p. 89], see also NIOSH Criteria Document for Epichlorohydrin p. 2, and 29 C.F.R. § 1910.1000 p. 656, see also attachment to January 25, 1978 letter of Dr. DeGraff which was also in the possession of Pratt and Whitney and which specified a 5 ppm TLV (Exhibit F);

(3) OSHA regulations mandate engineering controls to meet these regulations and that respirators were to be used only during installation, testing, repair or emergencies if the recommended limits were exceeded [Schrager Deposition at pp. 89-90 and 92, See also Kwon Deposition pp. 34 and 45] and that engineering controls were to be utilized to the exclusion of personal protective gear to meet OSHA standards [Schrager Deposition, pp. 92, 94 and 95, See also Kwon Deposition, *id.*; and 29 C.F.R. § 1910.134(a)(1)]; and

(4) Dr. Schrager had no evidence the OSHA limits were ever exceeded at Pratt and Whitney and that the only evidence in the record was either that there was no epichlorohydrin detected at Pratt and Whitney or that it was below the OSHA standard [Schrager Deposition, pp. 80-86, 93 and 96].

Mr. Owen testified extensively as to the engineering controls used at Mr. Pedraza's work bench. Owen Deposition, pp. 30-35; see also Schibi Deposition at pp. 19-22. Mr. Owen as well as Mr. Schibi testified that the ventilation equipment installed at Mr. Pedraza's workbench met the NIOSH respiratory protection criteria. Schibi Deposition, at pp. 22-33; Owen Deposition, at pp. 30-33 and 34-35.

Dr. Schrager's almost exclusive source of knowledge as to the properties of epichlorohydrin are government summary documents, i.e., the NIOSH Criteria Document of 1976, Exhibit E, and the EPA Health Assessment Document of 1984. Schrager Deposition, pp. 37-39. Dr. Schrager testified that employers like Pratt & Whitney would have such government handbooks and government regulations in their possession. Schrager Deposition, p. 86. Indeed, the second page of Exhibit 4 to Dr. Schrager's Deposition, which was an internal memorandum from Richard Owen to Dr. Lancour (Pratt and Whitney's executive in charge of industrial hygiene) indicates that Pratt and Whitney had an industrial hygiene library which contained the specific NIOSH documents on epichlorohydrin. See Exhibit 4 to Schrager Deposition (Attached to Schrager Deposition).

I. LACK OF JURISDICTION

A. This Court Lacks Subject Matter Jurisdiction of Plaintiff's "Failure To Warn" Claims.

This Court lacks jurisdiction under 29 U.S.C. § 667(a) because there are federal standards, 29 C.F.R. §§ 1910.132, 1910.133, 1910.134 and 1910.1000, which govern personal

protective gear and respiratory hazards in the workplace designed to protect workers from dermal, inhalational, and ingestion hazards in the workplace and specifically, standards pertaining to epichlorohydrin (specifically the epichlorohydrin inhalation standard of 5 ppm, 29 C.F.R. § 1910.1000). These measures are reflected in 29 C.F.R. §§ 1910.132, 1910.133 and 1910.134. As there is a standard in effect under § 655 of the OSHA Act which governs the controlling plaintiffs' allegations (see above factual discussion), there is no state court jurisdiction to assert control over this subject area outside of the regulations provided by OSHA. If the state court has no jurisdiction to exercise control through personal injury actions neither does this court sitting in diversity. Indeed to permit a jury to consider Dr. Schrager's opinion would be to rewrite the OSHA statute and regulations issued under it. This is precisely why there is a preemption doctrine.

Congress has the power to establish an exclusive method for the enforcement of federal law. Whether a particular federal law establishes exclusive federal jurisdiction over a particular area turns on congressional intent. *International Longshoremen's Ass'n v. Davis*, 476 U.S. 380, 388, 90 L.Ed.2d 389, 106 S.Ct. 1904 (1986). There, the Supreme Court distinguished between the effect of certain provisions of the National Labor Relations Act, which provided for concurrent state and federal jurisdiction of certain labor law issues, and a statute such as the bankruptcy act, which specifically divested state courts of jurisdiction of certain subjects. *See, e.g., Chicago & Northwestern Transp. Co. v. Kalo Brick & Tile Co.*, 450 U.S. 311, 330-31 (1981); *Kalb v. Feuerstein*, 308 U.S. 433 (1940).

B. Congress Expressly Preempted State Court Jurisdiction Of Subjects Regulated by OSHA.

The OSHA statute clearly divested state courts of any power to assert jurisdiction over issues regulated through OSHA:

> Nothing in this chapter will prevent *any state agency or court from asserting jurisdiction under state law* over any occupational safety or health issue with respect *to which no standard is in effect under section 655 of this title.*

29 U.S.C. § 667(a) (1985) (emphasis added). See also 29 C.F.R. § 1901.2 (OSHA interpretation of statute to the effect that OSHA jurisdiction was exclusive). The specific references to "state . . . court" and "jurisdiction under state law" expressed the congressional intent to limit the subject matter jurisdiction of the state courts in matters like the one at issue in this case solely to safety and health issues where *no* federal or state standard has been issued or considered pursuant to OSHA. The subject matter of this lawsuit is covered by regulations promulgated by the OSHA Administrator pursuant to the Occupational Safety and Health Act; thus, since there are standards as to personal protective gear and respiratory protection and specifically an exposure limit to epichlorohydrin there is no state court jurisdiction of plaintiff's "failure to warn" common law claims. See 29 C.F.R. §§ 1901.2, 1910.132, 1910.133, and 1910.134. Under OSHA the statutory language as well as the regulations are not merely preemptive but actually deprive the Court of jurisdiction.

C. State Courts Accept Federal Preemption Of Their Subject Matter Jurisdiction.

State courts have recognized that express federal preemption will divest them of subject matter jurisdiction. *Cadillac Insurance Co. v. L.P.C. Distributing Co.*, 770 S.W.2d 892, 894-95 (Tex. App.- San Antonio 1989, no writ); *Cathey v. Metropolitan Life Insurance Co.*, 764 S.W.2d 286, 292 (Tex. App. - Houston [1st Dist.] 1988, no writ); *Thornock v. State*, 745 P.2d 324 (Mont. 1987); *P & Z Co. Inc. v. Dist. of Columbia*, 408 A.2d 1249 (D.C. App. 1979).

A federal court sitting in a diversity case "is for that purpose, in effect, only another court of the State," and the court "cannot afford recovery if the right to recover is made unavailable by the State." *Guaranty Trust Co. v. York*, 326 U.S. 99, 108-109 (1945). The plain language of the OSHA statute's preemption section, 29 U.S.C. § 667(a) (1985), divests state courts of jurisdiction of matters regulated pursuant to OSHA. See also, 29 C.F.R. § 1901.2. This court, sitting for diversity purposes as a Connecticut state court, therefore, has no jurisdiction to enforce state common law causes of action affecting these workplace safety issues, because OSHA has established regulations affecting the same workplace safety issues which form the basis of plaintiffs' common law cause of action. See, *Pilot Life Ins. Co. v. Dedeaux*, 481 U.S. 41, 95 L.Ed.2d 39, 107 S.Ct. 1549 (1987). Under federal law, Mr. Pedraza's employer and Mr. Pedraza bore the sole responsibility to provide him the safety information his job required and to ensure his safety and well being. The employer acknowledged this obligation, acknowledged that they

were aware of the specific OSHA standards, and acknowledged its attempts to meet them; therefore, this Court lacks jurisdiction to alter that worker safety scheme by common law causes of action against a supplier of the product at issue.

II. OSHA PREEMPTS PLAINTIFF'S CAUSE OF ACTION FOR FAILURE TO WARN

A. General Preemption Standards

The Supreme Court has repeatedly explained the principles which govern a claim of federal preemption:

> Federal law may pre-empt state law in any of three ways. First, in enacting the federal law, Congress may explicitly define the extent to which it intends to pre-empt state law, *e.g., Shaw v. Delta Air Lines, Inc.*, 463 U.S. 85, 96-96, 103 S.Ct. 2890, 2898-2899, 77 L.Ed.2d 490 (1983). Second, even in the absence of express pre-emptive language, Congress may indicate an intent to occupy an entire field of regulation, in which case the States must leave all regulatory activity in that area to the Federal Government. *E.g., Fidelity Federal Savings & Loan Assn. v. De La Cuesta*, 458 U.S. 141, 153, 102 S.Ct. 3014, 3022 73 L.Ed.2d 664 (1982); *Rice v. Santa Fe Elevator Corp.*, 331 U.S. 218, 230, 67 S.Ct. 1146, 1152, 91 L.Ed. 1447 (1947). Finally, if Congress has not displaced state regulation entirely, it may nonetheless pre-empt state law to the extent that the state law actually conflicts with federal law. Such a conflict arises when compliance with both state and federal law is impossible, *Florida Lime & Avocado Growers, Inc. v. Paul*, 378 S.W. 132, 142-143, 83 S.Ct. 1210, 1217, 10 L.Ed.2d 248

> (1963), or when the state law "stands as an obstacle to the accomplishment and execution of the full purposes and objectives of Congress." *Hines v. Davidowitz*, 312 U.S. 52, 67 S.Ct. 399, 404, 85 L.Ed.2d 581 (1941). See also *Fidelity Federal Savings & Loan Assn., supra*, 458 U.S., at 153, 102 S.Ct., at 3022.

Michigan Canners and Freezers Association, Inc. v. Agricultural Marketing and Bargaining Board, 467 U.S. 461, 469 (1984); *accord Pacific Gas and Electric Co. v. State Energy Resources Conservation & Development Commission*, 461 U.S. 190, 203-04 (1983).

B. Current Legal Trends Support Preemption By FIFRA Of Common Law Personal Injury Claims

An emerging legal trend recognizes both express and/or implied preemption by federal regulatory programs in personal injury cases. National Traffic and Motor Vehicle Safety Act [An Act containing a Savings Clause still found to be impliedly preemptive], 15 U.S.C. § 1381 et seq., *Wood v. General Motors Corp.*, 865 F.2d 395 (1st Cir. 1988); *Taylor v. General Motors Corp.*, 875 F.2d 816 (11th Cir. 1989); *Kitts v. General Motors*, 875 F.2d 787 (10th Cir. 1989); [Food, Drug, and Cosmetic Act, 21 U.S.C. § 360(k)] (implied preemption), *Moore v. Kimberly Clark*, 867 F.2d 243 (5th Cir. 1989); [Federal Cigarette Labeling and Advertising Act, 15 U.S.C. § 1331 *et seq.*]; (implied preemption), *Stephen v. American Brands Inc.*, 825 F.2d 312 (11th Cir. 1987); *Palmer v. Liggett Group*, 825 F.2d 620 (1st Cir. 1987); and *Cipollone v. Liggett Group*, 789 F.2d 181 (3rd Cir. 1986), cert. denied 107 S.Ct 907 (1987). These cases reflect the continued application to personal injury cases

of the legal doctrine articulated in *San Diego Building Trades Council v. Garmon*, 359 U.S. 236, 3L.Ed.2d 775, 79 S.Ct. 773 (1959). A comparison of the pertinent statutory provisions of these other cases where preemption was upheld with OSHA is compelling since the OSHA language is express, is supported by agency interpretation and has a very limited savings clause. See, 21 U.S.C. § 360(k)(a); 15 U.S.C. § 1334; and 15 U.S.C. § 1392.

EXPRESS PREEMPTION

The language of the act itself evidences the requisite intent on the part of Congress to expressly preempt state statutes, regulations, or common law causes of action. When Congress adopted the Occupational Safety and Health Act in 1970, it considered the compatibility of federal and state occupational safety regulations and set up a procedure for federal approval of state plans. 29 U.S.C. § 667(b). Other than through that exclusive method, no provision exists for state regulation. See, 29 C.F.R. § 1901.2.

The express preemption provision of the Occupational Health and Safety Act has been recognized in a number of cases. *New Jersey State Chamber of Commerce v. Hughey*, 774 F.2d 587, 593 (3rd Cir. 1985) (state "right to know" act expressly preempted by federal Hazard Communication Standard to the extent that the federal standard applied to the same employees); *United Steelworkers v. Auchter*, 763 F.2d 728 (3rd Cir. 1985) (federal standards "requiring labels or other appropriate forms of warning" preempt state hazard disclosure laws); *Stanislawski v. Industrial Commission*, 99 Ill. 2d 36, 457 N.E.2d 399 (1983)

(additional compensation under state industrial safety standard disallowed because federal standard preempted state law). State regulations addressing training and education in the workplace are expressly preempted by federal regulations concerning the same hazards. *New Jersey State Chamber of Commerce v. New Jersey*, 653 F.Supp. 1453 (D.N.J. 1987).[1] Thus, the terms of 29 U.S.C. § 667(a) have been literally enforced to preempt state law where a federal standard addresses the same safety concerns as the state law. In addition, the OSHA statute is expressly preemptive by agency interpretation. 29 C.F.R. § 1901.2. Administrative regulations promulgated pursuant to Congressional authorization have the same preemptive effect as federal statutes. *Fidelity Savings and Loan Assoc. v. De la Cuesta*, 458 U.S. 141, 153-154, 102 S.Ct. 3014, 3022-3023, 73 L.Ed.2d 664 (1982).

Since OSHA is an express preemption statute, see, New Jersey State Chamber of Commerce, *supra* at 1464-1465 and 29 C.F.R. § 1901.2, common law causes of action are expressly preempted as well, *Pilot Life Insurance Co. v. Dedeaux, supra*. See also, *San Diego Bldg. Trades Council v. Garmon, supra*, and *International Paper Co. v. Ouellette*, 479 U.S. 481, 93 L.Ed.2d 883, 107 S.Ct. 805

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[1] Similar regulations which were not directed primarily to workers' health protection, but also to protecting the general public, were not preempted. *Environmental Encapsulating Corp. v. City of New York*, 666 F.Supp. 535 (S.D.N.Y. 1987).

(1987). If this Court finds it has jurisdiction, it should not permit plaintiffs and their expert to rewrite the OSHA Act and its regulations; accordingly, the Court should find the plaintiffs' claims in this action are expressly preempted.

IMPLIED PREEMPTION

The specific OSHA regulations as to personal protective equipment and an inhalational standard for epichlorohydrin, See 29 C.F.R. §§ 1910.132, 1910.133, 1910.134, and 1910.1000 impliedly preempt a warning claim such as this one where the plaintiffs' expert is trying to establish an exposure limit and protective equipment standard different from OSHA's. The best case the plaintiffs can make is that somehow the OSHA regulations aren't as precise as they should be, however, that doesn't evade the preemptive effect of OSHA. Where a federal regulatory agency has considered acting but hasn't, a state regulatory role is also impliedly preempted. See, *Missouri Pacific Railroad v. Railroad Comm. of Texas*, 850 F.2d 264 (5th Cir. 1988), cert. denied, 109 S.Ct. 794 (1989). In this case where compound *specific* regulations exist for epichlorohydrin the same result is compelled. *N.J. State Chamber of Commerce v. State of N.J., supra* at 1467; See also, the authorities cited in section II B of this memorandum as to express and implied preemption, specifically *Wood v. General Motors Corp.*, 865 F.2d 395 (1st Cir. 1988).

CONCLUSION

Accordingly, Shell believes this Court should dismiss the Pedrazas' claims for lack of jurisdiction or alternatively grant Shell's motion for summary judgment based on preemption.

Respectfully submitted,

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CERTIFICATE OF SERVICE

I, Burt Ballanfant, hereby certify that on the 14th day of December, 1989, I served a copy of the foregoing document by first class mail on Edward V. Leja, Esq., 1331 Main Street, Springfield, Massachusetts 01103.

/s/ Burt Ballanfant
Burt Ballanfant

CERTIFICATE OF SERVICE

I certify that this document has been served upon all counsel of record in compliance with F.R.C.P. on 12/14/89

/s/ Robert L. Leonard

APPENDIX 15

NIOSH

criteria for a recommended standard. . . .

occupational exposure to

EPICHLOROHYDRIN

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

Public Health Service / Center for Disease Control

National Institute for Occupational Safety and Health

criteria for a recommended standard. . . .

OCCUPATIONAL EXPOSURE TO EPICHLOROHYDRIN

(SEAL)

SHELL OIL COMPANY
SAFETY & INDUSTRIAL
HYGIENE DEPARTMENT

MAR 28 1980

U.S. DEPARTMENT OF HEALTH,
EDUCATION, AND WELFARE

Public Health Service

Center for Disease Control

National Institute for Occupational Safety and Health

SEPTEMBER 1976

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* * *

PREFACE

The Occupational Safety and Health Act of 1970 emphasizes the need for standards to protect the health and safety of workers exposed to an ever-increasing number of potential hazards at their workplace. The National Institute for Occupational Safety and Health has projected a formal system of research, with priorities determined on the basis of specified indices, to provide relevant data from which valid criteria for effective standards can be derived. Recommended standards for occupational exposure, which are the result of this work, are based on the health effects of exposure. The Secretary of Labor will weigh these recommendations along with other considerations such as feasibility and means of implementation in developing regulatory standards.

It is intended to present successive reports as research and epidemiologic studies are completed and as sampling and analytical methods are developed. Criteria and standards will be reviewed periodically to ensure continuing protection of the worker.

I am pleased to acknowledge the contributions to this report on epichlorohydrin by members of my staff and the valuable constructive comments by the Review Consultants on Epichlorohydrin, by the ad hoc committees of the American Conference of Governmental Industrial Hygienists and the American Occupational Medicine Association, and by Robert B. O'Connor, M.D., NIOSH

consultant in occupational medicine. The NIOSH recommendations for standards are not necessarily a consensus of all the consultants and professional societies that reviewed this criteria document on epichlorohydrin. Lists of the NIOSH Review Committee members and of the Review Consultants appear on the following pages.

/s/ John F. Finklea, M.D.
John Finklea, M.D.
Director, National Institute for
Occupational Safety and Health

The Division of Criteria Documentation and Standards Development, National Institute for Occupational Safety and Health, had primary responsibility for development of the criteria and recommended standard for epichlorohydrin. The Division review staff for this document consisted of J. Henry Wills, Ph.D., Howard Spencer, Ph.D., Seymour Silver, Ph.D., and Frank L. Mitchell, D.O.

Stanford Research Institute (SRI) developed the basic information for consideration by NIOSH staff and consultants under contract No. CDC-99-74-31. Jerry LR Chandler, Ph.D., had NIOSH program responsibility and served as criteria manager.

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NIOSH REVIEW CONSULTANTS
ON EPICHLOROHYDRIN

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CRITERIA DOCUMENT: RECOMMENDATIONS FOR AN OCCUPATIONAL EXPOSURE STANDARD FOR EPICHLOROHYDRIN

Table of Contents

	Page
PREFACE	iii
NIOSH REVIEW COMMITTEE	vi
NIOSH REVIEW CONSULTANTS	vii
I. RECOMMENDATIONS FOR AN EPICHLOROHYDRIN STANDARD	1
Section 1 – Environmental (Workplace Air)	2
Section 2 – Medical	3
Section 3 – Labeling and Posting	4
Section 4 – Personal Protective Equipment	5

Table of Contents (Continued)

		Page
Section 5 –	Informing Employees of Hazards from Epichlorohydrin	9
Section 6 –	Work Practices	10
Section 7 –	Sanitation	14
Section 8 –	Monitoring and Recordkeeping Requirements	15
II.	INTRODUCTION	18
III.	BIOLOGIC EFFECTS OF EXPOSURE	20
	Extent of Exposure	20
	Historical Reports	22
	Effects on Humans	24
	Epidemiologic Study	35
	Animal Toxicity	39
	Effects on Reproduction	68
	Carcinogenicity	71
	Mutagenicity	74
	Correlation of Exposure and Effect	81
	Carcinogenicity, Mutagenicity, and Teratogenicity	84
IV.	ENVIRONMENTAL DATA AND ENGINEERING CONTROLS	92
	Environmental Data	92
	Sampling and Analysis	94
	Engineering Controls	99
V.	DEVELOPMENT OF STANDARD	101
	Basis for Previous Standards	101
	Basis for Recommended Standard	102
VI.	WORK PRACTICES	108

Table of Contents (Continued)

		Page
VII.	RESEARCH NEEDS	111
VIII.	REFERENCES	114
IX.	APPENDIX I – Method for Sampling Epichlorohydrin in Air	122
X.	APPENDIX II – Analytical Method for Epichlorohydrin	126
XI.	APPENDIX III – Material Safety Data Sheet	134
XII.	APPENDIX IV – Glossary	144
XIII.	TABLES AND FIGURES	147

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I. RECOMMENDATIONS FOR AN EPICHLOROHYDRIN STANDARD

The National Institute for Occupational Safety and Health (NIOSH) recommends that employee exposure to epichlorohydrin in the workplace be controlled by adherence to the following sections. The standard is designed to protect the health and safety of employees for up to a 10-hour workday, 40-hour workweek, over a working lifetime. Compliance with all sections of the standard should prevent adverse effects produced by exposure of employees to epichlorohydrin. Although the workplace environmental limits are considered to be safe levels based on current information, they should be regarded as the upper boundary of exposure, and every effort should be made to maintain exposure as low as is technically feasible. The standard is measurable by techniques that

are available and there is sufficient technology to permit compliance with the recommended standard. The standard will be subject to review and revision as necessary.

These criteria and the recommended standard apply to exposure of employees to solid, liquid, or gaseous 3-chloro-1, 2-epoxypropane, hereafter referred to as "epichlorohydrin," either alone or in combination with other substances. Synonyms for epichlorohydrin include 1-chloro-2, 3-epoxypropane, (chloromethyl) ethylene oxide, chloromethyloxirane, chloropropylene oxide, gamma-chloropropylene oxide, 3-chloro-1, 2-propylene oxide, 2-chloromethyl-oxirane, alpha-epichlorohydrin, epichlorhydrin, and epichlorophydrin.

"Occupational exposure to epichlorohydrin" is defined as exposure to airborne epichlorohydrin at concentrations exceeding the action level. The "action level" is defined as one-half of the recommended time-weighted average (TWA) environmental concentration for epichlorohydrin. Exposure to airborne epichlorohydrin at concentrations equal to or less than one-half of the workplace environmental limit, as determined in accordance with Section 8, will not require adherence to the following sections except for 2, 3, 4(a), 5(a,b,c,d), 6, and 7. If exposure to other chemicals also occurs, provisions of any applicable standard for the other chemicals shall also be followed.

Section 1 – Environmental (Workplace Air)

(a) Concentration

Occupational exposure to epichlorohydrin shall be controlled so that employees are not exposed to

epichlorohydrin at concentrations greater than 2 milligrams per cubic meter of air (approximately 0.5 parts per million parts of air by volume) determined as a TWA concentration for up to a 10-hour workday, 40-hour workweek, with a ceiling concentration of 19 milligrams per cubic meter of air (approximately 5 parts per million parts of air by volume) as determined by a sampling time of 15 minutes.

(b) Sampling and Analysis

Procedures for sampling and analysis of environmental samples and calibration of equipment shall be as provided in Appendices I and II, or by any methods shown to be at least equivalent, in accuracy, sensitivity, and precision to the methods specified.

Section 2 – Medical

Medical surveillance shall be made available to all persons subject to occupational exposure to epichlorohydrin as described below:

(a) Preplacement medical examinations shall include:

(1) Comprehensive medical and work histories.

(2) Complete physical examination, giving particular attention to the kidneys, liver, respiratory tract, and hematopoietic system. Additionally, employees shall be evaluated for complaints and evidence of eye, mucous membrane, or skin irritation. Further tests, such as determinations of the concentrations of serum glutamic-pyruvic transaminase (SGPT), serum glutamic-oxaloacetic

transaminase (SGOT), and lactic dehydrogenase (LDH), may be considered by the responsible physician.

(3) An evaluation of the ability of the worker to use respirators.

(b) Periodic examinations shall be made available on an annual basis. These examinations shall include, but shall not be limited to:

(1) Interim medical and work histories.

(2) Physical examination as outlined in paragraph (a) (2) of this section. The responsible physician shall consider administering appropriate organ function tests.

(c) Proper medical management shall be provided for employees overexposed to epichlorohydrin. When there is known or suspected overexposure to epichlorohydrin, immediate first-aid measures shall be followed by prompt medical evaluation and followup assistance. First aid shall include removal of the employee from the area of excessive epichlorohydrin exposure, restoration of, or assistance in, breathing by trained personnel, and treatment of chemical burns.

(d) The responsible physician shall advise the worker that available information indicates that large doses of epichlorohydrin induce antifertility effects on rats; however, no effects on potency have been found. The relevance of this study to male or female workers has not yet been determined. It does, however, indicate that employers and workers should attempt to minimize exposures to epichlorohydrin whenever possible. If the physician becomes aware of any adverse effects on the

reproductive systems of workers exposed to epichlorohydrin, the information shall be forwarded to the Director, National Institute for Occupational Safety and Health, as promptly as possible.

(e) Pertinent medical records shall be maintained and made available to the designated medical representatives of the employer, of the employee or former employee, of the Secretary of Labor, and of the Secretary of Health, Education, and Welfare. These records shall be retained for 20 years following the employee's last occupational exposure to epichlorohydrin.

Section 3 – Labeling and Posting

(a) Labeling

Containers of epichlorohydrin shall carry a label stating:

EPICHLOROHYDRIN

POISON! FLAMMABLE!

SKIN CONTACT CAUSES DELAYED BURNS

Avoid contact with eyes, skin, and clothing.
Avoid breathing vapor.
Use only with adequate ventilation.
Keep away from heat and open flame.
Keep container closed.
Do not take internally.

First Aid: In case of skin contact, immediately remove all contaminated clothing, including footwear, wash skin with plenty of water for at least 15 minutes and call a

physician. In case of eye contact, flush eyes with water for 15 minutes and call a physician.

(b) Posting

Areas where epichlorohydrin is manufactured, stored, used, or handled shall be posted with a sign reading:

EPICHLOROHYDRIN

POISON! FLAMMABLE!

SKIN CONTACT CAUSES DELAYED BURNS
VAPOR IRRITATING TO EYES
HARMFUL IF INHALED OR SWALLOWED

The sign shall be printed both in English and in the predominant language of non-English-reading workers, if any; the employer shall use these or other equally effective means to ensure that all employees know the hazards associated with epichlorohydrin and the locations of areas in which there is likely to be occupational exposure to epichlorohydrin.

Section 4 – Personal Protective Equipment

(a) Protective Clothing

(1) Chemical safety goggles and face shields shall be provided by the employer and shall be worn during any operation in which epichlorohydrin may splash into the eyes. Suitable eye protective devices shall conform to 29 CFR 1910.133.

(2) Aprons, suits, boots, or face shields shall be worn when needed to prevent skin contact with liquid epichlorohydrin. The protective clothing for this purpose shall be made of impervious material, such as polyethylene, polypropylene, or polyvinyl chloride (PVC). Use of protective clothing made of neoprene, rubber, or leather is unsuitable.

(b) Respiratory Protection

Engineering controls shall be used to maintain epichlorohydrin concentrations below the recommended environmental limits. Such control equipment shall be sparkproof. Compliance with the permissible exposure limit may not be achieved by the use of respirators except during the time necessary to install or test the required engineering controls, for nonroutine maintenance or repair activities in which brief exposures at concentrations in excess of the recommended limits may occur, and during emergencies when air concentrations of epichlorohydrin may exceed the recommended limits.

When a respirator is permitted by paragraph (b) of this section, it shall be selected and used pursuant to the following requirements:

(1) For the purpose of determining the type of respirator to be used, the employer shall measure, when possible, the concentration of airborne epichlorohydrin in the workplace initially and thereafter whenever process, worksite, or control changes occur which are likely to increase the epichlorohydrin concentrations; this requirement does not apply when only atmosphere-supplying, positive pressure respirators are used. The employer shall

ensure that no worker is exposed to epichlorohydrin in excess of the recommended workplace environmental limits because of improper respirator selection, fit, use, or maintenance.

(2) A respiratory protection program meeting the requirements of 29 CFR 1910.134 shall be established and enforced by the employer.

(3) The employer shall provide respirators in accordance with the provisions of both Table I-1 and 30 CFR 11 and shall ensure that the employee uses the respirator provided.

(4) Respirators specified for use in higher concentrations of epichlorohydrin may be used in atmospheres of lower concentrations.

(5) The employer shall ensure that respirators are adequately cleaned, and that employees are instructed in the use and the testing for leakage of respirators assigned to them.

(6) Where an emergency which could result in employee injury from overexposure to epichlorohydrin may develop, the employer shall provide respiratory protection as listed in Table I-1.

TABLE I-1

RESPIRATOR SELECTION GUIDE

Maximum Use Concentration	Respirator Type
Less than or equal to 25 ppm	(1) Gas mask with chin-style or front- or back-mounted organic vapor canister (2) Type C supplied-air respirator operated in the pressure-demand (positive pressure) or continuous-flow mode
Less than or equal to 100 ppm	(1) Gas mask (full facepiece) with chin-style or front-mounted organic vapor canister with impervious plastic cover for head and neck (2) Type C supplied-air respirator operated in the pressure-demand (positive pressure) or continuous-flow mode with a full facepiece and impervious plastic cover for head and neck
Less than or equal to 1,000 ppm	Type C supplied-air respirator with hood, helmet, or suit operated in the continuous-flow mode

TABLE I-1 Continued

RESPIRATOR SELECTION GUIDE

Maximum Use Concentration	Respirator Type
Greater than 1,000 ppm	(1) Self-contained breathing apparatus with full facepiece operating either in the demand (negative pressure) mode or in the pressure-demand (positive pressure) mode worn under an impervious plastic suit with headpiece (2) Combination Type C supplied-air respirator with full facepiece operated in the pressure-demand (positive pressure) mode and an auxiliary self-contained air supply worn under an impervious plastic suit with headpiece
Emergency (no concentration limit)	(1) Self-contained breathing apparatus in the pressure-demand (positive pressure) mode with full facepiece (2) Combination supplied-air respirator with an auxiliary self-contained air supply and full facepiece operated in the pressure-demand (positive pressure) mode

TABLE I-1 Continued

RESPIRATOR SELECTION GUIDE

Maximum Use Concentration	Respirator Type
Escape (no concentration limit)	(1) Gas mask (full facepiece) with chin- or front-mounted organic vapor canister (2) Self-contained breathing apparatus with full facepiece operating either in the demand (negative pressure) mode or in the pressure-demand (positive pressure) mode

Section 5 – Informing Employees of Hazards from Epichlorohydrin

(a) Each employee working in an area where exposure to epichlorohydrin is likely, shall be informed of the signs and symptoms of overexposure, emergency and first-aid procedures, the hazards of chronic exposure, and precautions to ensure safe use of epichlorohydrin and to minimize exposure. All information shall be posted in the workplace and shall be readily accessible to the employee.

(b) Employers shall ensure that all such employees have current knowledge of job hazards, maintenance procedures, and cleanup methods, and that they know how to use respiratory protective equipment and protective clothing.

(c) Employees and members of emergency teams who work near epichlorohydrin systems or containers where a potential for emergencies exists shall participate in periodic drills simulating emergencies appropriate to the work situation. Drills shall be held at intervals not greater than 6 months. Drills should include, but should not be limited to:

Evacuation procedures.
Handling of spills and leaks, including decontamination.
Location and use of emergency firefighting equipment, and handling of epichlorohydrin systems or containers in case of fire.
First-aid and rescue procedures, including prearranged procedures for obtaining emergency medical care.
Location, use, and care of protective clothing and respiratory protective equipment.
Location of shut-off valves or switches.
Location, purpose, and use of safety showers and eyewash fountains.
Operating procedures including communication procedures.
Entry procedures into confined spaces.

Deficiencies noted during drills shall be included in the continuing educational program together with the required remedial actions. Records of drills and training sessions shall be kept and made available for inspection by authorized personnel upon request.

(d) Information as required shall be recorded on the "Material Safety Data Sheet" shown in Appendix III, or on a similar form approved by the Occupational Safety and Health Administration, US Department of Labor.

Section 6 – Work Practices

(a) Engineering controls, such as process enclosure or local exhaust ventilation, shall be used to maintain epichlorohydrin concentrations at or within the recommended workplace environmental limits. Ventilation systems shall be designed to prevent the accumulation or recirculation of epichlorohydrin in the workplace and to remove epichlorohydrin from the breathing zones of exposed workers. When used, exhaust ventilation systems discharging to outside air must conform with applicable local, state, and federal air pollution regulations. Ventilation systems shall undergo regular preventive maintenance and cleaning to ensure maximum effectiveness, which shall be verified by periodic airflow measurements. Records of these measurements shall be maintained for at least 1 year.

(b) When an operation involves the use of epichlorohydrin in an open vessel, which is not part of an isolated system, continuous local exhaust ventilation shall be provided so that air movement is always from the work areas to the operation. Exhaust air shall not be discharged in the work areas and clean makeup air shall be introduced in sufficient volume to maintain the correct operation of the local exhaust system. Containers of epichlorohydrin shall be labeled in accordance with Section 3 and shall be kept tightly closed at all times when not in use. Storage provisions are listed in 29 CFR 1910.106(a)19(iii). Containers shall be protected from heat, corrosion, mechanical damage, and sources of ignition.

(c) Any spilled epichlorohydrin shall be promptly cleaned up. During cleanup operations, complete skin and respiratory protective equipment shall be used. After a cleanup operation, the employee shall be required to shower upon removing the protective equipment. If epichlorohydrin is spilled on shoes made of leather, canvas, rubber, or of any other permeable material, the shoes shall be rendered unusable and discarded. If clothing is contaminated with epichlorohydrin, it shall be removed promptly and laundered thoroughly before reuse.

(d) Appropriate regulations for Class IC flammable liquids are provided in 29 CFR 1910.106.

(e) Prior to maintenance work, sources of epichlorohydrin vapor shall be eliminated to the extent feasible. The employees shall be provided with appropriate skin and respiratory protective equipment.

(f) Confined Spaces

(1) Entry into confined spaces, such as tanks, pits, tank cars, barges, process vessels, and tunnels, shall be controlled by a permit system. Permits shall be signed by an authorized employer representative certifying that preparation of the confined space, precautionary measures, and personal protective equipment are adequate, and that precautions have been taken to ensure that the prescribed procedures will be followed.

(2) Confined spaces which have contained epichlorohydrin shall be inspected and tested for oxygen deficiency, epichlorohydrin, and other contaminants, and, prior to entry by the employee, they shall be thoroughly ventilated, cleaned, and washed.

(3) Inadvertent entry of epichlorohydrin into the confined space while work is in progress shall be prevented by disconnecting and blocking of epichlorohydrin supply lines or by other appropriate means.

(4) Confined spaces shall be ventilated appropriately while work is in progress to keep the concentration of epichlorohydrin at or below the recommended environmental limits and to ensure an adequate supply of oxygen.

(5) Individuals entering confined spaces where they may be exposed to epichlorohydrin shall wear either a combination Type C supplied-air respirator operated in the continuous-flow (Positive pressure) mode or an auxiliary breathing air supply operated in the pressure-demand (Positive pressure) mode equipped with a full facepiece, or a self-contained breathing apparatus operated in the pressure-demand (Positive pressure) mode. Each individual shall also wear a suitable harness with lifelines tended by another employee outside the space who shall also be equipped with the necessary protective equipment, including a self-contained breathing apparatus which operates in the pressure-demand (Positive pressure) mode and has a full facepiece. Communication (visual, voice, signal line, telephone, radio, or other suitable means) shall be maintained by the standby person with the employees inside the enclosed spaces.

(g) For all work areas where epichlorohydrin is used, procedures as specified in this section, as well as any other procedures appropriate for a specific operation or process, shall be formulated in advance. Employees

shall be comprehensively instructed in the implementation of emergency procedures.

(1) Procedures shall include prearranged plans for obtaining emergency medical care and for transportation of injured workers to medical facilities.

(2) Firefighting procedures shall be established and drills conducted. These shall include procedures for emergencies involving fire and release of epichlorohydrin vapor. In case of fire, epichlorohydrin sources shall be shut off or removed as soon as feasible. Containers of epichlorohydrin shall be removed or cooled with water spray as soon as feasible. Chemical foam, carbon dioxide, or dry chemicals shall be used for extinguishing epichlorohydrin fires. Proper respiratory protective devices and protective clothing shall be worn to protect against epichlorohydrin, acid gases, and other combustion products of epichlorohydrin.

(3) Approved eye, skin, and respiratory protective devices as specified in Section 4 shall be used by all personnel who are essential to emergency operations.

(4) During emergencies, employees not essential to the emergency operations shall be evacuated. A warning system informing the employees of the evacuation shall be established. Boundaries of areas where the emergency occurred shall be delineated, posted, and secured as soon as feasible. Entry into hazardous areas shall be prohibited to employees not essential to the emergency operations.

(5) Personnel trained and knowledgeable in the safety procedures and adequately protected against the

attendant hazards shall shut off sources of epichlorohydrin, clean up spills, and immediately repair leaks.

Section 7 – Sanitation

(a) Food preparation, storage, dispensing, and eating shall be prohibited in posted work areas.

(b) Smoking shall be prohibited in posted work areas.

(c) Safety showers and eyewash fountains shall be installed in and adjacent to posted work areas.

(d) Shower facilities shall be made available to employees who may have occupational exposure to epichlorohydrin.

Section 8 – Monitoring and Recordkeeping Requirements

Workers will not be considered to have occupational exposure to epichlorohydrin if the environmental concentrations, as determined by an industrial hygiene survey conducted within 6 months of the promulgation of a standard, do not exceed one-half the recommended TWA environmental limit, ie, the action level. Surveys shall be repeated at least once every 3 months and within 30 days after any process change likely to result in increases of airborne concentrations of epichlorohydrin. Records of these surveys, including the basis for concluding that airborne concentrations of epichlorohydrin are at or below the action level, shall be maintained. If the survey indicates that airborne concentrations of epichlorohydrin

exceed the action level, then the following requirements apply:

(a) Personal Monitoring

(1) A program of personal monitoring shall be instituted to identify and measure, or permit calculation of, the exposure of all employees who are occupationally exposed to epichlorohydrin. Interim monitoring of employee exposure to airborne concentrations of epichlorohydrin shall be conducted at least every 3 months. If monitoring of an employee's exposure to epichlorohydrin reveals that the employee is exposed at concentrations in excess of the recommended TWA environmental limit, the exposure of that employee shall be measured at least once every 30 days, control measures shall be initiated, and the employee shall be notified of the exposure and of the control measures being implemented to correct the situation. Such monitoring shall continue until two consecutive samplings, at least 1 week apart, indicate that the employee's exposure no longer exceeds the TWA environmental limit recommended in Section 1(a). Quarterly monitoring may then be resumed.

(2) In all personal monitoring, samples of airborne epichlorohydrin that will provide upon analysis an accurate representation of the concentration of epichlorohydrin in the air the worker breathes shall be collected. Procedures for sampling, calibration of equipment, and analysis of epichlorohydrin in samples shall be as provided in Section 1(b).

(3) For each TWA determination, a sufficiently large number of samples shall be taken to characterize

each employee's exposure during each workday. Variations in work and production schedules shall be considered in deciding when samples are to be collected. The number of representative TWA determinations for an operation or process shall be based on the variations in location and job functions of employees in relation to that operation or process.

(b) Recordkeeping Procedures

Records shall be maintained and shall include sampling and analytical methods, type of respiratory protective device used, and TWA and ceiling concentrations found. Each employee shall have access to data on personal environmental exposures and records of such data shall be included in his medical records. Pertinent records of required medical examinations, including records of occupational accidents, and environmental exposures within the workplace shall be maintained for 20 years after the worker's last occupational exposure to epichlorohydrin and shall be available to the designated medical representatives of the Secretary of Labor, of the Secretary of Health, Education, and Welfare, of the employer, and of the employee or former employee.

II. INTRODUCTION

This report presents the criteria and the recommended standard based thereon which were prepared to meet the need for preventing occupational diseases arising from exposure to epichlorohydrin. The criteria document fulfills the responsibility of the Secretary of Health, Education, and Welfare, under Section 20(a)(3) of the Occupational Safety and Health Act of 1970 to

" . . . develop criteria dealing with toxic materials and harmful physical agents and substances which will describe . . . exposure levels at which no employee will suffer impaired health or functional capacities or diminished life expectancy as a result of his work experience."

The National Institute for Occupational Safety and Health (NIOSH), after a review of data and consultation with others, formalized a system for the development of criteria upon which standards can be established to protect the health of workers from exposure to hazardous chemical and physical agents. These criteria for a standard for epichlorohydrin are part of a continuing series of criteria developed by NIOSH. The proposed standard applies only to the processing, manufacture, and use of, or other occupational exposure to, epichlorohydrin as applicable under the Occupational Safety and Health Act of 1970. The standard was not designed for the population-at-large, and any extrapolation beyond occupational exposures is not warranted. It is intended to (1) protect against the development of acute and chronic effects of epichlorohydrin exposure, (2) protect against local effects on the skin, (3) be measurable by techniques that are available to industry and government agencies, and (4) be attainable with existing technology.

The development of the criteria for the recommended standard for occupational exposure to epichlorohydrin has elucidated the need for further research in the following areas: (1) further epidemiologic studies of employees exposed to epichlorohydrin, (2) animal studies designed to determine the cumulative effects from inhalation of airborne epichlorohydrin at concentrations below 5 ppm, (3) studies on the mutagenic effects of epichlorohydrin in

mammals, and (4) animal studies to investigate the carcinogenic effects from epichlorohydrin inhalation. To fill these information gaps, a concerted effort is required by those people who are involved with the health and safety of employees exposed to epichlorohydrin.

* * *

IV. ENVIRONMENTAL DATA AND ENGINEERING CONTROLS

Environmental Data

Dow Chemical Company [2] reported personnel monitoring data by job classification for its units which produce allyl chloride, epoxy resin, and glycerine. Sampling was conducted with charcoal tubes using a calibrated, battery-operated pump. Quintuplicate samples were taken for each job classification at a rate of 2 liters/minute for 7 hours. Epichlorohydrin and chlorinated hydrocarbons were extracted with 30 ml of carbon disulfide. Epichlorohydrin recovery from the charcoal, after sampling, was found to be 65%. Analysis was performed with a hydrogen flame chromatograph equipped with a 12 feet x 1/8 inch column packed with 15% Oronite NiW on gas chrom CLA (60-80 mesh). In 1973, in the epoxy resin unit, one air sample in the breathing zone of each of four employees (three operators and one helper) showed the average epichlorohydrin concentration to be 0.03 ppm. In the same year, 78 grab samples indicated that epichlorohydrin concentrations ranged from 13 ppm to less than 0.60 ppm, with an average of 3.17 ppm. It should be noted that the "average" was a numerical average between the individual samples, not the TWA concentrations. The results of air monitoring done in 1974

are presented in Table IV-1. In the glycerine distribution unit, five air samples in the breathing zones of an operator, two for the head operator, and two for the technician showed epichlorohydrin concentration to be below 0.01 ppm. These were taken in 1975. Results of air monitoring for epichlorohydrin done in the glycerine plant in 1975 are presented in Table IV-2. Epichlorohydrin concentrations in the allyl chloride unit were below 0.1 ppm.

TABLE IV-1

EPICHLOROHYDRIN CONCENTRATIONS
IN THE AIR IN AN EPOXY-PRODUCING UNIT (1974)

Job Classification	No. Samples	Epichlorohydrin (ppm(v/v)		
		High	Low	Average
Warehouse operator	4	0.30	0.30	0.30
Machinist	1	0.10	0.10	0.10
Pipefitter	2	0.30	0.30	0.30
Control C operator	3	0.90	0.40	0.66
2d class operator BIS	1	0.10	0.10	0.10
Grab samples	25	15.00	0.60	2.02
Stationary monitoring	23	1.00	0.10	0.26

From reference 2

TABLE IV-2

EPICHLOROHYDRIN CONCENTRATIONS
IN THE AIR IN A GLYCERINE-PRODUCING UNIT (1975)

Job Classification	No. Samples	Epichlorohydrin (ppm(v/v)		
		High	Low	Average
Control "A"	5	1.37	0.24	0.54
Instrument	2	0.01	0.01	0.01
Lab	6	0.67	0.01	0.11
Shift foreman	3	0.24	0.01	0.08
EPI helper	4	0.18	0.01	0.05
Control "A" finishing	2	0.01	0.01	0.01
Maintenance	13	4.69	0.01	1.50

From reference 2

Pet'ko et al [11] reported the results of environmental monitoring done in epichlorohydrin and dichlorhydrin-glycerine production units in Russia. The sampling technique employed was not specified. Concentrations of epichlorohydrin ranged from 19 to 21 mg/cu m (4.9-5.5 ppm) in the zone of employees who withdrew samples for quality control from the epichlorohydrin-production process. Airborne concentration of epichlorohydrin reached 12-15 mg/cu m (3.1-3.9 ppm) during the filling of tanks with epichlorohydrin. During an emergency caused by mechanical difficulties, a concentration range of 210-211 mg/cu m (54.6-54.9 ppm) was recorded.

Fomin [28] reported that, at about 100-200 meters from a factory discharging epichlorohydrin into the atmosphere, the airborne epichlorohydrin concentration exceeded the maximum permissible concentration of 0.2 mg/cu m by factors of 2.5-6. At a distance of 400 meters, 5 of 29 samples indicated that epichlorohydrin concentrations exceeded the 0.2 mg/cu m limit. No epichlorohydrin was detected at distances of 500-600 meters from the factory.

Sampling and Analysis

There are many general methods of sampling and analysis for organic vapors. A few of these have been adapted or found suitable for epichlorohydrin.

Impingerl or bubblers containing distilled water have been used for epichlorohydrin vapor collection. [38,79] A 2-1iter air sample is drawn through two bubblers in series, containing 8 ml of water each, at a sampling rate of 0.5 liter/minute. [79] When a test atmosphere was used, the percentage of epichlorohydrin trapped in the first bubbler decreased as the atmospheric concentration decreased. At a concentration of 20 mg/cu m (approximately 5.2 ppm), the efficiency of one bubbler was 80%. For greater accuracy, two bubblers were recommended. The main disadvantage of such a sampling system is the difficulty in obtaining a personal sample. Since the collection medium is liquid, some sample loss can occur from spillage and evaporation. Epichlorohydrin vapor has also been collected in bubblers containing sulfuric acid. [80]

Plastic bags [81-84] and glass bottles [85] have been used for sampling industrial air. Usually, this has

involved obtaining a volume of air over a very short time, from a few seconds to 2 minutes. Such sampling techniques are best suited for obtaining information on ceiling concentrations. However, sampling with plastic bags has been modified to determine TWA concentrations. [84] Aluminum foil-polyester laminate bags or Teflon bags were used. The advantage of this technique is that both TWA and excursion values can be estimated. However, 24-hour sample losses were 20-26% and 19-40% for epichlorohydrin stored in Teflon and aluminum foilpolyester laminate bags, respectively. These losses occurred when the epichlorohydrin concentration in the air sampled ranged from 5 to 27 ppm. [84] Bulkiness of the containers has created transportation problems.

Adsorption on silica gel [80,86,87] or activated charcoal [88-90] is commonly used to collect organic vapors. Reid and Halpin [91] found charcoal tubes both efficient and practical for sampling a number of chlorinated hydrocarbons. At present, a major manufacturing company uses charcoal tubes for sampling epichlorohydrin. [2] Epichlorohydrin in air has been sampled at 20-30 liters/hour through a glass tube (45-mm long and 3 mm in diameter) containing 0.1 g silica gel. [80] Data on collection efficiency were not given. However, sampling with silica gel in high humidity may result in considerable sample loss from the displacement of the organic vapors by water vapor. Whitman and Johnston [92] reported that this problem could be overcome with a molecular sieve prefilter. They used a 5-Angstrom molecular sieve to remove water vapor from gas streams without interfering with the passage of aromatic hydrocarbons. White et al [89] have described the design of

activated charcoal tubes suitable for sampling, and such tubes are commercially available. Adsorption on activated charcoal is the preferred sampling method for epichlorohydrin alone for several reasons: epichlorohydrin is not displaced by water vapor as it is from silica gel; it is a simpler, more convenient procedure than the use of plastic bags or of a bubbler; it uses a small, portable sampling device, and the difficulties associated with handling liquids are eliminated. Disadvantages are that the amount of sample that can be collected is limited by the number of milligrams that the charcoal tube will hold before overloading, and that the more volatile compounds can migrate to the backup section during storage before analysis.

Various methods used for analyzing the collected samples have included colorimetry, [79,80] infrared analysis, [93,94] and gas chromatography. [90,95] Colorimetric analysis suitable for analyzing epichlorohydrin in an aqueous solution has been used. [79] The colorimetric method [79] is based on the oxidation of epichlorohydrin in aqueous solution by periodic acid. Epichlorohydrin in water is hydrolyzed to a glycol which is then oxidized to formaldehyde. Epichlorohydrin solutions of known concentrations are prepared to obtain the standard curve. The formaldehyde further reacts with sodium arsenite and acetylacetone reagent to form a yellow complex. The acetylacetone reagent solution is prepared by mixing ammonium acetate, acetylacetone, and glacial acetic acid in water. Maximum optical density of the yellow complex occurs at about 412 nm. This method was capable of determining as little as 20ug of epichlorohydrin. Data on the efficiency of the analytical technique were not given.

[79] Formaldehyde, or any substance that may yield formaldehyde under the test conditions, will interfere. Compounds that contain or would form vicinal terminal hydroxy groups, such as ethylene glycol and ethylene oxide, will also interfere.

A colorimetric method [80] suitable for analyzing epichlorohydrin collected in sulfuric acid also has been used. Air containing epichlorohydrin was drawn through two bubblers containing 3 ml of 20% sulfuric acid and 4 ml of 10% sulfuric acid, respectively. The content of the first bubbler was diluted 1:1 with water. A 3-ml sample was then oxidized with 0.5 ml of 3% potassium iodate solution and allowed to stand for 30 minutes, during which time a yellow color developed. A 10% sodium sulfite solution was added and the mixture was shaken until the color disappeared. One milliliter of Schiff's reagent was then added and the intensity of the resulting color (magenta) was measured 1 hour later. The initial reactions occurring were similar to those in the previously discussed colorimetric method. [79] Epichlorohydrin is hydrolyzed by sulfuric acid and the resulting glycol is oxidized to formaldehyde by the iodate. The formaldehyde then reacts with Schiff's reagent to form a magenta complex. Sodium sulfite is added to reduce the unreacted iodate. It was found that this method was capable of analyzing 0.01-0.1 mg epichlorohydrin in a 6-ml solution. Data on sensitivity, specificity, and interferences were not reported. However, the same compounds that would interfere with the previously discussed colorimetric technique, [79] such as ethylene oxide and ethylene glycol, would also interfere

with this method. In addition, many aldehydes would interfere.

The formaldehyde can also react with phenylhydrazine hydrochloride to form phenylhydrazone. [38] The phenylhydrazone of formaldehyde reacts with potassium ferricyanide to form a colored complex. The maximum optical density of this complex occurs at about 500 nm. Epichlorohydrin concentrations ranging from 0.45 to 14 mg/cu m in air were determined by this method. Precision tests indicated the maximum error between the two determinations to be only 0.3%.

The infrared absorption spectrum of epichlorohydrin showed the typical terminal epoxide absorption bands. [93] The minimum amount of epichlorohydrin that was detected by infrared absorption was 0.3% (v/v in aqueous solution). [94] However, a practical and detailed technique using infrared analysis for a quantitative determination of epichlorohydrin has not been developed.

In recent years, gas chromatography has become the method of choice of most investigators for separation and the analysis of organic materials. [89,90] It offers excellent specificity and sensitivity and is suitable for analyzing samples of airborne contaminants collected on charcoal. Interferences are few, and most of those which do occur can be eliminated by altering the instrumental conditions. Muganlinsky et al [95] developed a linear temperature program to analyze epichlorohydrin in the presence of chlorinated hydrocarbons which may be present as impurities.

The recommended methods for sampling and analyzing epichlorohydrin are collection by charcoal tube and

analysis by gas chromatography. Sampling involves the collection of personal samples on charcoal tubes, and analysis involves desorption with carbon disulfide and measurement with a gas chromatograph equipped with a suitable detector. [90] Details of the recommended methods are given in Appendices I and II. The recommended methods are not validated for monitoring or for an environment that may contain other substances that may interfere. Other sampling and analytical methods equivalent in accuracy, precision, and sensitivity may be used.

Engineering Controls

Engineering design for safety in working with epichlorohydrin should be such as to reduce the concentration of airborne epichlorohydrin. Closed systems, properly operated and maintained, should be used in all cases where practicable. Frequent tests must be conducted for leaks in closed systems. Where closed systems are not feasible, well-designed local exhaust ventilation systems must be provided. Guidance for design can be found in *Industrial Ventilation – A Manual of Recommended Practice,* [96] or more recent revisions, and in *Fundamentals Governing the Design and Operation of Local Exhaust Systems, ANSI Z9.2-1971.* [97] In operations where epichlorohydrin is transferred, changed, or discharged into otherwise normally closed systems, continuous local exhaust should be provided at the transfer point. Sufficient ventilation with clean air should be maintained in the area to permit the correct operation of the local exhaust system.

Respiratory protective equipment is not an acceptable substitute for proper engineering controls but should be available in emergencies and for nonroutine maintenance and repair work situations.

V. DEVELOPMENT OF STANDARD

Basis for Previous Standards

In 1965, the American Conference of Governmental Industrial Hygienists (ACGIH) adopted a threshold limit value (TLV) of 5 ppm (approximately 19 mg/cu m) for epichlorohydrin. [98]

In a personal communication cited in the *Documentation of Threshold Limit Values for Substances in Workroom Air,* [99] Smyth and Pozzani stated that cases of skin burns and sensitization, with resulting intolerance to trivial exposures, occurred in workers during the handling and production of epichlorohydrin. Systemic poisoning caused by epichlorohydrin penetration of the skin also was reported. Therefore, the ACGIH epichlorohydrin TLV listing was accompanied by a "skin" notation. [99] Such a notation refers to the potential contribution to overall exposure by the cutaneous route, including mucous membranes and eyes, either by airborne or, more particularly, by direct skin contact with liquid epichlorohydrin. This designation is intended to indicate the need for appropriate measures for the prevention of cutaneous absorption so that the TLV is not invalidated.

The present federal standard (29 CFR 1910.1000) for occupational exposure to epichlorohydrin is 5 ppm as an

8-hour TWA limit. This standard was based on the ACGIH TLV.

In Russia and in France, the maximum allowable concentration (MAC) in the industrial environment is 1 mg/cu m (0.26 ppm). [100] In the Rumanian Socialist Republic, 10 mg/cu m (approximately 2.6 ppm) of epichlorohydrin is the maximum concentration allowed in the occupational environment. [38] In the Federal Republic of Germany, the permissible environmental exposure limit is 18 mg/cu m (approximately 3.6 ppm), and 5 mg/cu m (approximately 1 ppm) in the German Democratic Republic. [100] The bases for these standards are not given. Air and water quality standards have not been found, although one recommendation of such a value (0.2 mg/cu m) has been presented. [28]

Basis for the Recommended Standard

The induction of severe necrotic lesions occurring after dermal contact with epichlorohydrin has been reported. [35] A latency period lasting from several minutes to several hours between contact with liquid epichlorohydrin and the appearance of skin damage was observed. Epichlorohydrin penetrates the skin and can induce adverse systemic effects following dermal contact. [25,27,35] These necrotic lesions have been compared with those induced by X-rays or by other alkylating agents such as ethylene oxide or propanesultone. [35] These observations require, therefore, that complete skin protection be provided to employees handling epichlorohydrin. Care must be taken to ensure that shoes,

gloves, and other protective clothing are made of material impervious to epichlorohydrin.

Reports on humans occupationally exposed to epichlorohydrin have identified the effects resulting from acute exposure. [28,37,38] Transient burning of the eyes and nasal passages in persons after exposure to epichlorohydrin at a concentration of 20 ppm was reported, [37,38] while exposure at 40 ppm caused eye and nasal irritation lasting 48 hours. [37,38] Lung edema and kidney lesions were reported in humans exposed to epichlorohydrin at concentrations greater than 100 ppm for very short periods. [37,38] Changes in the voltage of the peaks of the alpha rhythm of the EEG measurements of volunteers exposed to epichlorohydrin at 0.08 ppm for a few minutes were reported by Fomin. [28] Since the significance of the changes observed in this component of the EEG measurements is not known, further research needs to be conducted in this area before any interpretations can be made. Acute exposure to epichlorohydrin at a high, but unknown, concentration [33] caused irritation of the eyes and throat, nausea, and dyspnea; bronchitis with bronchiolar constrictions and enlarged liver were suspected to have resulted from this single overexposure. These findings [28,37,38] suggest that a ceiling is required. Since acute effects have been observed on humans at 20 ppm, and the lowest concentration which induces effects during a short interval has not been identified, a ceiling concentration of 19 mg/cu m (5 ppm), based on professional judgment, is recommended to protect even the more sensitive fraction of the working population from these adverse effects.

The existing federal standard of 5 ppm is based on the 1968 TLV. Further information on cumulative aspects of toxicity such as sterility, carcinogenesis, and mutagenesis have been reported in subsequent studies. [28,31,32,39,64-66,74]

The report by Shumskaya et al [32] indicated that disrupted liver function and kidney damage developed in rats after single 4-hour exposures to epichlorohydrin at concentrations of 91, 5.2, or 1.8 ppm, the effects being least severe at 1.8 ppm. The authors did not indicate whether the chamber was static or dynamic. Thus, data from this study suggest that minor adverse effects are observed on animals inhaling a total amount of 1.0 mg/kg within 4 hours. The data demonstrate the induction of measurable biochemical perturbations, but cannot be used to predict the cumulative effects to be expected from long-term exposures to epichlorohydrin.

Kremneva and Tolgskaya [27] have reported neither mortality nor signs of intoxication in rats exposed for 3 hours at about 5.2-15.6 ppm daily for up to 6.5 months. Lags in body weight gains, initial increases in the excitability thresholds, elevations in blood pressures, and fluctuations in oxygen consumptions were observed in the animals when compared with the controls. They concluded that 5.2-15.6 ppm of epichlorohydrin approximated the threshold in rats, which is interpreted to mean that no measurable adverse effects occurred below these concentrations.

The minimal concentration which has been observed to induce effects on rats (about 5 ppm) is used to approximate the permissible exposure in the occupational environment by weighing additional risk factors. The chronic

effects for which risk must be considered are carcinogenesis, mutagenesis, and antifertility, as well as liver, kidney, and lung damage.

Van Duuren et al [64] found that a single application of 2.0 mg of epichlorohydrin on mouse skin initiated the tumorigenic process in at least 9 of the 30 experimental mice when it was followed by triweekly applications of a promoter (Phorbol myristate acetate) for the remainder of the 385-day experiment. The promoter alone induced papillomas in 3 of 30 mice. No initiation was observed in the control animals. Weil et al [63] and Van Duuren et al [64] found that repeated applications of epichlorohydrin on mouse skin did not induce a significant number of skin lesions. Van Duuren et al [64] found that sarcoma and adenocarcinoma were induced in 6 of 50 mice given weekly subcutaneous injections of 1.0 mg of epichlorohydrin in 0.05 ml of tricaprylin (P values less than 0.05). Only 1 of the 50 control animals injected with tricaprylin alone developed sarcoma. No sarcomas developed in untreated control animals. The results were considered significant only when the P value was less than or equal to 0.05.

Antifertility effects, including persistent sterility, have been induced in animals exposed to epichlorohydrin. [39-41] Twelve repeated oral doses of 15 mg/kg of epichlorohydrin sterilized male rats. [41] Even though sterility occurred in animals following oral administration of epichlorohydrin, it is probable that similar effects would be produced by inhalation, since severe systemic effects have been observed after both dermal and inhalation exposures. [25,27] Epstein et al [61] did

not observe any increase in the frequency of dead implantations in the uteri of mice following ip injections of 150 mg/kg of epichlorohydrin into the male rats mated to the females, nor did they provide any evidence of reduced fertility at this dosage.

Mutagenic effects of epichlorohydrin have been observed in microbial organisms and in the eukaryotic fruit fly, Drosophila melanogaster, following exposure to epichlorohydrin. [70] The number of point mutations observed in several microbial species increased as a function of epichlorohydrin concentration and duration of exposure. At present, an experimental relationship between the frequency of dead implantations and that of point mutations has not been observed. The positive results from the point mutation test systems in lower organisms, such as bacteria, [7376] fungi, [71] and Drosophila melanogaster, [70] indicate that an increased risk of occurrence of point mutations may exist in human populations exposed to epichlorohydrin. The fact that preparations derived from the urine of workers exposed to 25 ppm of epichlorohydrin influenced the genetic mechanisms in Salmonella typhimurium (DJ Kilian, written communication, April 1976) is consistent with the existence of a genetic risk to human populations exposed to epichlorohydrin.

The total risk to the health of employees occupationally exposed to epichlorohydrin is the result of the independent risks due to carcinogenesis, mutagenesis, sterility, and damage to kidneys, liver, respiratory tract, and to the skin. At present, evidence for the existence of the risks, other than to skin depends primarily on data from experimental animal models. Concern for employee

health requires that the probability of the occurrence of chronic effects be minimized. NIOSH recommends, therefore, that worker exposure to epichlorohydrin be limited to a concentration of 2 mg/cu m (0.5 ppm) as a TWA concentration. This value has been chosen on the basis of professional judgment, rather than on quantitative data which clearly distinguish no-effect concentrations from those at which adverse effects have been shown to occur in human populations. A TWA concentration of 2 mg/cu m of epichlorohydrin should protect the employee against injury to organs during the individual's working lifetime, according to existing information. However, additional research is needed to provide support for the recommended environmental limit or to indicate the need for a different limit. The environmental limit implicitly assumes that the absorbed epichlorohydrin molecules will be detoxified by biochemical mechanisms, thereby reducing the risk of induction of human disease resulting from the cumulative toxicity of epichlorohydrin.

It is recognized that many employees handle small amounts of epichlorohydrin or work in situations where, regardless of the amount used, there is only negligible contact with epichlorohydrin. Under these conditions, it should not be necessary to comply with all of the provisions of the recommended standard, which has been prepared primarily to protect employee health under all circumstances. For these reasons, "occupational exposure to epichlorohydrin" is defined as exposure above one-half the TWA environmental limit, thereby delineating those work situations which do not require the expenditure of resources for environmental monitoring and associated recordkeeping. Because of nonrespiratory hazards

such as the production of burns on the skin in the use of epichlorohydrin, NIOSH recommends that appropriate work practices and protective measures to limit such contact be required regardless of the concentration of airborne epichlorohydrin. Further, the observation of changes in the concentration of biochemical constituents [48] following human and animal exposure to epichlorohydrin suggest that the health of the exposed workers be monitored frequently. Thus, it is recommended that comprehensive medical examinations be offered to all employees subject to occupational exposure to epichlorohydrin and that the responsible physician consider the advisability of also administering any liver and kidney function tests.

* * *

XI. APPENDIX III

MATERIAL SAFETY DATA SHEET

The following items of information which are applicable to a specific product or material shall be provided in the appropriate block of the Material Safety Data Sheet (MSDS).

The product designation is inserted in the block in the upper left corner of the first page to facilitate filing and retrieval. Print in upper case letters as large as possible. It should be printed to read upright with the sheet turned sideways. The product designation is that name or code designation which appears on the label, or by which the product is sold or known by employees. The relative numerical hazard ratings and key statements are those

determined by the rules in Chapter V, Part B, of the NIOSH publication, *An Identification System for Occupationally Hazardous Materials*. The company identification may be printed in the upper right corner if desired.

(a) Section I. Product Identification

The manufacturer's name, address, and regular and emergency telephone numbers (including area code) are inserted in the appropriate blocks of Section I. The company listed should be a source of detailed backup information on the hazards of the material(s) covered by the MSDS. The listing of suppliers or wholesale distributors is discouraged. The trade name should be the product designation or common name associated with the material. The synonyms are those commonly used for the product, especially formal chemical nomenclature. Every known chemical designation or competitor's trade name need not be listed.

(b) Section II. Hazardous Ingredients

The "materials" listed in Section II shall be those substances which are part of the hazardous product covered by the MSDS and individually meet any of the criteria defining a hazardous material. Thus, one component of a multicomponent product might be listed because of its toxicity, another component because of its flammability, while a third component could be included both for its toxicity and its reactivity. Note that an MSDS for a single component product must have the name of the material repeated in this section to avoid giving the impression that there are no hazardous ingredients.

Chemical substances should be listed according to their complete name derived from a recognized system of nomenclature. Where possible, avoid using common names and general class names such as "aromatic amine," "safety solvent," or "aliphatic hydrocarbon" when the specific name is known.

The "%" may be the approximate percentage by weight or volume (indicate basis) which each hazardous ingredient of the mixture bears to the whole mixture. This may be indicated as a range or maximum amount, ie, "10-40% vol" or "10% max wt" to avoid disclosure of trade secrets.

Toxic hazard data shall be stated in terms of concentration, mode of exposure or test, and animal used, eg, "100 ppm LC50-rat," "25 mg/kg LD50-skin-rabbit," "75 ppm LC man," or "permissible exposure from 29 CFR 1910.1000," or, if not available, from other sources of publications such as the American Conference of Governmental Industrial Hygienists or the American National Standards Institute Inc. Flashpoint, shock sensitivity, or similar descriptive data may be used to indicate flammability, reactivity, or similar hazardous properties of the material.

(c) Section III. Physical Data

The data in Section III should be for the total mixture and should include the boiling point and melting point in degrees Fahrenheit (Celsius in parentheses); vapor pressure, in conventional millimeters of mercury (mmHg); vapor density of gas or vapor (air = 1); solubility in water,

in parts/hundred parts of water by weight; specific gravity (water = 1); percent volatiles (indicated if by weight or volume) at 70 degrees Fahrenheit (21.1 degrees Celsius); evaporation rate for liquids or sublimable solids, relative to butyl acetate; and appearance and odor. These data are useful for the control of toxic substances. Boiling point, vapor density, percent volatiles, vapor pressure, and evaporation are useful for designing proper ventilation equipment. This information is also useful for design and deployment of adequate fire and spill containment equipment. The appearance and odor may facilitate identification of substances stored in improperly marked containers, or when spilled.

(d) Section IV. Fire and Explosion Data

Section IV should contain complete fire and explosion data for the product, including flashpoint and autoignition temperature in degrees Fahrenheit (Celsius in parentheses); flammable limits, in percent by volume in air; suitable extinguishing media or materials; special firefighting procedures; and unusual fire and explosion hazard information. If the product presents no fire hazard, insert "NO FIRE HAZARD" on the line labeled "Extinguishing Media."

(e) Section V. Health Hazard Information

The "Health Hazard Data" should be a combined estimate of the hazard of the total product. This can be expressed as a TWA concentration, as a permissible exposure, or by some other indication of an acceptable

standard. Other data are acceptable, such as lowest LD50, if multiple components are involved.

Under "Routes of Exposure," comments in each category should reflect the potential hazard from absorption by the route in question. Comments should indicate the severity of the effect and the basis for the statement, if possible. The basis might be animal studies, analogy with similar products, or human experiences. Comments such as "yes" or "possible" are not helpful. Typical comments might be:

Skin Contact – causes delayed burns.

Eye Contact – some pain and transient irritation.

"Emergency and First Aid Procedures" should be written in lay language and should primarily represent first-aid treatment that could be provided by paramedical personnel or individuals trained in first aid.

Information in the "Notes to Physician" section should include any special medical information which would be of assistance to an attending physician including required or recommended preplacement and periodic medical examinations, diagnostic procedures, and medical management of overexposed employees.

(f) Section VI. Reactivity Data

The comments in Section VI relate to safe storage and handling of hazardous, unstable substances. It is particularly important to highlight instability or incompatibility to common substances or circumstances, such as water, direct sunlight, steel or copper piping, acids, alkalies, etc. "Hazardous Decomposition Products" shall

include those products released under fire conditions. It must also include dangerous products produced by aging, such as peroxides in the case of some ethers. Where applicable, shelf life should also be indicated.

(g) Section VII. Spill or Leak Procedures

Detailed procedures for cleanup and disposal should be listed with emphasis on precautions to be taken to protect employees assigned to cleanup detail. Specific neutralizing chemicals or procedures should be described in detail. Disposal methods should be explicit including proper labeling of containers holding residues and ultimate disposal methods such as "sanitary landfill" or "incineration." Warnings such as "comply with local, state, and federal antipollution ordinances" are proper but not sufficient. Specific procedures shall be identified.

(h) Section VIII. Special Protection Information

Section VIII requires specific information. Statements such as "Yes," "No," or "If necessary" are not informative. Ventilation requirements should be specific as to type and preferred methods. Respirators shall be specified as to type and NIOSH or US Bureau of Mines approval class, ie, "Supplied air," "Organic vapor canister," etc. Protective equipment must be specified as to type and materials of construction.

(i) Section IX. Special Precautions

"Precautionary Statements" shall consist of the label statements selected for use on the container or placard.

Additional information on any aspect of safety or health not covered in other sections should be inserted in Section IX. The lower block can contain references to published guides or in-house procedures for handling and storage. Department of Transportation markings and classifications and other freight, handling, or storage requirements and environmental controls can be noted.

(j) Signature and Filing

Finally, the name and address of the responsible person who completed the MSDS and the date of completion are entered. This will facilitate correction of errors and identify a source of additional information.

The MSDS shall be filed in a location readily accessible to employees potentially exposed to the hazardous material. The MSDS can be used as a training aid and basis for discussion during safety meetings and training of new employees. It should assist management by directing attention to the need for specific control engineering, work practices, and protective measures to ensure safe handling and use of the material. It will aid the safety and health staff in planning a safe and healthful work environment and in suggesting appropriate emergency procedures and sources of help in the event of harmful exposure of employees.

MATERIAL SAFETY DATA SHEET

I PRODUCT IDENTIFICATION	
MANUFACTURER'S NAME	REGULAR TELEPHONE NO EMERGENCY TELEPHONE NO
ADDRESS	
TRADE NAME	
SYNONYMS	

II HAZARDOUS INGREDIENTS		
MATERIAL OR COMPONENT	%	HAZARD DATA

III PHYSICAL DATA			
BOILING POINT 760 MM HG		MELTING POINT	
SPECIFIC GRAVITY (H_2O = 1)		VAPOR PRESSURE	
VAPOR DENSITY (AIR = 1)		SOLUBILITY IN H_2O, % BY WT	
% VOLATILES BY VOL		EVAPORATION RATE (BUTYL ACETATE = 1)	
APPEARANCE AND ODOR			

IV FIRE AND EXPLOSION DATA

FLASH POINT (TEST METHOD)		AUTOIGNITION TEMPERATURE			
FLAMMABLE LIMITS IN AIR % BY VOL	LOWER		UPPER		
EXTINGUISHING MEDIA					
SPECIAL FIRE FIGHTING PROCEDURES					
UNUSUAL FIRE AND EXPLOSION HAZARD					

V HEALTH HAZARD INFORMATION

HEALTH HAZARD DATA

ROUTES OF EXPOSURE

- INHALATION
- SKIN CONTACT
- SKIN ABSORPTION
- EYE CONTACT
- INGESTION

EFFECTS OF OVEREXPOSURE

- ACUTE OVEREXPOSURE
- CHRONIC OVEREXPOSURE

EMERGENCY AND FIRST AID PROCEDURES

- EYES
- SKIN
- INHALATION
- INGESTION

NOTES TO PHYSICIAN

App. 224

VI REACTIVITY DATA

CONDITIONS CONTRIBUTING TO INSTABILITY

INCOMPATIBILITY

HAZARDOUS DECOMPOSITION PRODUCTS

CONDITIONS CONTRIBUTING TO HAZARDOUS POLYMERIZATION

VII SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED

NEUTRALIZING CHEMICALS

WASTE DISPOSAL METHOD

VIII SPECIAL PROTECTION INFORMATION

VENTILATION REQUIREMENTS

SPECIFIC PERSONAL PROTECTIVE EQUIPMENT

RESPIRATORY (SPECIFY IN DETAIL)

EYE

GLOVES

OTHER CLOTHING AND EQUIPMENT

IX SPECIAL PRECAUTIONS

PRECAUTIONARY STATEMENTS

OTHER HANDLING AND STORAGE REQUIREMENTS

PREPARED BY

ADDRESS

DATE